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CHOLESTERYL ESTER

CETP ACTIVITY

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Type of Search	___ APS
___ N.A. Sequence	___ Geninfo
___ A.A. Sequence	___ SDC
___ Structure	___ DARC/Questel
___ Bibliographic	___ Other

Please search:

Cholesteryl Ester Transfer Protein is a substance which acts on Cholesteryl esterase, an enzyme which shuttles lipids among high density, low and intermediate density lipoproteins. The invention is an assay for cholesteryl ester transfer protein (CETP) where it acts upon a cholesteryl ester or cholesteryl esterase which is fluorescently labeled.

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=> s cholesteryl ester transfer

          1468 CHOLESTERYL
        170790 ESTER
        409215 TRANSFER
L1          29 CHOLESTERYL ESTER TRANSFER
                 (CHOLESTERYL(W)ESTER(W)TRANSFER)

=> s l1 and fluores?

         63534 FLUORES?
L2          14 L1 AND FLUORES?

=> d 1-14 cit ab
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1. 5,846,720, Dec. 8, 1998, Methods of determining chemicals that modulate expression of genes associated with cardiovascular disease; J. Gordon Foulkes, et al., 435/6, 69.8, 91.5, 320.1 [IMAGE AVAILABLE]

US PAT NO: 5,846,720 [IMAGE AVAILABLE] L2: 1 of 14

ABSTRACT:
The invention provided for a method of transcriptionally modulating the expression of a gene encoding a protein of interest associated with treatment of one or more symptoms of a cardiovascular disease. Further provided is a method of determining whether a molecule not previously known to be a modulator of protein biosynthesis is capable of directly and specifically transcriptionally modulating the expression of a gene encoding a protein of interest associated with treatment of one or more symptoms of a cardiovascular disease. Screening methods, including methods of essentially simultaneously screening molecules to determine whether the molecules are capable of directly and specifically transcriptionally modulating one or more genes encoding proteins of interest associated with treatment of one or more symptoms of a cardiovascular disease, are also provided.

2. 5,837,810, Nov. 17, 1998, Polypeptides of lipopolysaccharide binding protein; Jiahuai Han, et al., 530/350 [IMAGE AVAILABLE]

US PAT NO: 5,837,810 [IMAGE AVAILABLE] L2: 2 of 14

ABSTRACT:
The present invention provides a first polypeptide fragment of lipopolysaccharide (LPS) binding protein (LBP) which binds to lipopolysaccharide, but prevents the LPS:LBP complex from either transferring LPS to CD14 or promoting the formation of an LPS:CD14 complex and a second polypeptide fragment of LBP which binds to CD14 receptor to inhibit binding of LPS:LBP complex to the CD14 receptor. Also included are methods of ameliorating symptoms of sepsis in a subject by administration of a LBP polypeptide of the invention, or administration of antibody to LBP polypeptide or anti-idiotype antibody.

3. 5,789,197, Aug. 4, 1998, Microsomal triglyceride transfer protein; John R. Wetterau, II, et al., 435/69.1, 15, 320.1; 530/350; 536/23.5 [IMAGE AVAILABLE]

US PAT NO: 5,789,197 [IMAGE AVAILABLE] L2: 3 of 14

ABSTRACT:
Nucleic acid sequences, particularly DNA sequences, coding for all or part of the high molecular weight subunit of microsomal triglyceride transfer protein, expression vectors containing the DNA sequences, host cells containing the expression vectors, and methods utilizing these materials. The invention also concerns polypeptide molecules comprising all or part of the high molecular weight subunit of microsomal triglyceride transfer protein, and methods for producing these polypeptide molecules. The invention additionally concerns novel methods for preventing, stabilizing or causing regression of atherosclerosis and therapeutic agents having such activity. The invention concerns further novel methods for lowering serum liquid levels and therapeutic agents having such activity.

4. 5,783,600, Jul. 21, 1998, Carboxyalkylethers, formulations, and treatment of vascular diseases; Charles Larry Bisgaier, et al., 514/547, 381, 529, 531, 535, 544, 546, 557, 571, 572, 573, 574, 693, 699 [IMAGE AVAILABLE]

US PAT NO: 5,783,600 [IMAGE AVAILABLE] L2: 4 of 14

ABSTRACT:
Dialkyl ethers lower Lp(a) and triglycerides, and elevate HDL-cholesterol, and are thereby useful for treating vascular diseases and noninsulin-dependent diabetes mellitus.

5. 5,770,355, Jun. 23, 1998, Heart disease test kit and method of determining a heart disease risk factor and efficacy of a treatment for heart disease; Robert W. Brocia, 435/4, 15, 23, 975; 436/13, 63, 71, 74, 149, 542 [IMAGE AVAILABLE]

US PAT NO: 5,770,355 [IMAGE AVAILABLE] L2: 5 of 14

ABSTRACT:
There is disclosed a non-radioactive method and kit for determining a heart disease risk factor and for determining efficacy of treatment for heart disease.

6. 5,756,544, May 26, 1998, Carboxyalkylethers, formulations, and treatment of vascular diseases; Charles Larry Bisgaier, et al., 514/547, 381, 529, 530, 531, 533, 544, 546, 557, 571, 572, 573, 574, 693, 699 [IMAGE AVAILABLE]

US PAT NO: 5,756,544 [IMAGE AVAILABLE] L2: 6 of 14

ABSTRACT:
Dialkyl ethers lower Lp(a) and triglycerides, and elevate HDL-cholesterol, and are thereby useful for treating vascular diseases and noninsulin-dependent diabetes mellitus.

7. 5,750,569, May 12, 1998, Carboxyalkylethers, formulations, and treatment of vascular diseases; Charles Larry Bisgaier, et al., 514/547, 381, 529, 531, 535, 544, 546, 557, 571, 572, 573, 574, 693, 699 [IMAGE AVAILABLE]

US PAT NO: 5,750,569 [IMAGE AVAILABLE] L2: 7 of 14

ABSTRACT:
Dialkyl ethers lower Lp(a) and triglycerides, and elevate HDL-cholesterol, and are thereby useful for treating vascular diseases and noninsulin-dependent diabetes mellitus.

8. 5,733,879, Mar. 31, 1998, Peptides and proteins, process for their preparation and their use as cholesterol acceptors; Maryvonne Rosseneu, et al., 514/13, 12, 21; 530/324, 326, 359 [IMAGE AVAILABLE]

US PAT NO: 5,733,879 [IMAGE AVAILABLE] L2: 8 of 14

ABSTRACT:

The subject invention relates to amino acid sequences derived from peptide (Glu.sup.1,8, Leu.sup.11,17) 18A, comprising: Glu-Trp-Leu-A-Ala-B-Tyr-C-Lys-Val-D-Glu-Lys-Leu-Lys-Glu-Leu-Phe, wherein A is Lys, Glu or Asp; B is Phe, Glu or Asp; C is Glu, Lys or Arg; and D is Leu, Glu or Asp. The amino acid sequences form complexes with phospholipids, and are useful for the treatment of cardiovascular disease.

9. 5,648,387, Jul. 15, 1997, Carboxyalkylethers, formulations, and treatment of vascular diseases; Charles Larry Bisgaier, et al., 514/547, 381, 531, 533, 544, 546, 557, 571, 572, 693, 699; 548/253; 560/60, 124, 177, 180; 562/470, 506, 577, 583; 568/420, 442, 494 [IMAGE AVAILABLE]

US PAT NO: 5,648,387 [IMAGE AVAILABLE] L2: 9 of 14

ABSTRACT:
Dialkyl ethers lower Lp(a) and triglycerides, and elevate HDL-cholesterol, and are thereby useful for treating vascular diseases and noninsulin-dependent diabetes mellitus.

10. 5,618,683, Apr. 8, 1997, Diagnostic kit for **cholesteryl ester transfer** protein (CETP) activity measurement and a new synthetic particle used therein; Robert W. Brocia, et al., 435/11, 4, 7.9, 7.92, 810, 975; 436/809, 817, 829; 514/2 [IMAGE AVAILABLE]

US PAT NO: 5,618,683 [IMAGE AVAILABLE] L2: 10 of 14

ABSTRACT:
A diagnostic device is provided that determines the activity of CETP by the use of a new synthesized donor particle. The method in the diagnostic device for measuring the activity of **cholesteryl ester transfer** protein comprises: adding a prepared sonicated particle to a buffer to form a buffered solution, adding an Intralipid emulsion to the buffered solution for the purpose of accepting the transfer of neutral lipid, adding **cholesteryl ester transfer** protein to the buffered solution incubating the buffered solution, and reading the **fluorescence** of the buffer solution to measure the activity of the **cholesteryl ester transfer** protein. The synthesized donor particle is representative of a high density lipoprotein and comprises a **fluorescent** group, N-(7-nitrobenz-2-oxa-1,3-diazol-4-yl) amino-covalently bound to a cholesteryl ester to form a NBD-CE core, a monolayer of phospholipid that surrounds the NBD-CE core and an apolipoprotein apoA-I associated with the monolayer and an aqueous phase.

11. 5,595,872, Jan. 21, 1997, Nucleic acids encoding microsomal trigyceride transfer protein; John R. Wetterau, II, et al., 435/6, 320.1; 536/23.1 [IMAGE AVAILABLE]

US PAT NO: 5,595,872 [IMAGE AVAILABLE] L2: 11 of 14

ABSTRACT:
Nucleic acid sequences, particularly DNA sequences, coding for all or part of the high molecular weight subunit of microsomal triglyceride transfer protein, expression vectors containing the DNA sequences, host cells containing the expression vectors, and methods utilizing these materials. The invention also concerns polypeptide molecules comprising all or part of the high molecular weight subunit of microsomal

triglyceride transfer protein, and methods for producing these polypeptide molecules. The invention additionally concerns novel methods for preventing, stabilizing or causing regression of atherosclerosis and therapeutic agents having such activity. The invention concerns further novel methods for lowering serum liquid levels and therapeutic agents having such activity.

12. 5,585,235, Dec. 17, 1996, **Fluorescent** assay and method that corrects for spectral interference; Robert W. Brocia, 435/4, 7.9, 7.92, 11, 810, 975; 436/809, 817, 829; 514/2 [IMAGE AVAILABLE]

US PAT NO: 5,585,235 [IMAGE AVAILABLE] L2: 12 of 14

ABSTRACT:
A method is provided for measuring the activity of **cholesteryl ester transfer** protein or MTP. The method comprises the steps of: adding a prepared emulsion particle to a buffer to form a buffered solution simulating physiological conditions, adding an emulsion of lipid to the buffered solution of prepared sonicated particle, adding a source of CETP or MTP to the buffered solution, adding a compound to the buffered solution for the purpose of testing the compound's effect on the neutral lipid transfer protein (CETP or MTP) activity, incubating the buffered mixture, reading the **fluorescence** of the solution, and calculating the effect of the compound on the emission spectra of the transfer label so transfer activity can than be accurately determined. A device that determines the activity of CETP or MTP by the use of a newly synthesized donor particle without regard to the presence of colored or otherwise interfering factors. A system comprises a donor particle comprised of a self quenching **fluorescent** neutral lipid core, an acceptor particle to accept protein facilitated transfer of **fluorescent** neutral lipid, and determining interference on the emission intensity of the **fluorescence** of the particles.

13. 5,580,722, Dec. 3, 1996, Methods of determining chemicals that modulate transcriptionally expression of genes associated with cardiovascular disease; J. Gordon Foulkes, et al., 435/6, 91.1, 91.2 [IMAGE AVAILABLE]

US PAT NO: 5,580,722 [IMAGE AVAILABLE] L2: 13 of 14

ABSTRACT:
The invention provided for a method of directly and specifically transcriptionally modulating the expression of a gene encoding a protein of interest associated with treatment of one or more symptoms of a cardiovascular disease such as atherosclerosis, restenosis or hypertension.
Further provided is a method of determining whether a molecule not previously known to be a modulator of protein biosynthesis is capable of directly and specifically transcriptionally modulating the expression of a gene encoding a protein of interest associated with treatment of one or more symptoms of a cardiovascular disease.
Lastly, the invention provides a method of directly and specifically transcriptionally modulating in a human being the expression of a gene encoding a protein of interest associated with treatment of one or more symptoms of a cardiovascular disease, thus ameliorating the disease.

14. 5,459,567, Oct. 17, 1995, Method for determining the degree of spectral interference in an assay having a test sample; Robert W. Brocia, 356/318; 250/458.1, 459.1; 356/417 [IMAGE AVAILABLE]

US PAT NO: 5,459,567 [IMAGE AVAILABLE] L2: 14 of 14

ABSTRACT:
A method to determine the degree of spectral interference in an assay containing a test sample in which a graph plot of efficiency versus ratio

of a **fluorescence** label is a known standard. The assay is placed in a fluorimeter and excited with light energy at the excitation wavelength of the **fluorescence** label. The entire emission spectrum is examined and an actual **fluorescence** emission intensity value is obtained from the

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=> e brocia, r/in

E#      FILE            FREQUENCY  TERM
--      ----            ---------  ----
E1      USPAT                1     BROCHU, RONALD P/IN
E2      USPAT                2     BROCHU, SIMON/IN
E3      USPAT                0 --> BROCIA, R/IN
E4      USPAT                1     BROCIA, ROBERT/IN
E5      USPAT                6     BROCIA, ROBERT W/IN
E6      USPAT                1     BROCINER, HASKAL/IN
E7      USPAT                1     BROCINER, RONALD E/IN
E8      USPAT                4     BROCINER, RONALD ERIC/IN
E9      USPAT                1     BROCIOUS, GEORGE D/IN
E10     USPAT                1     BROCIOUS, GEORGE DALE/IN
E11     USPAT                3     BROCK FISHER, GEORGE A/IN
E12     USPAT                1     BROCK NANNESTAD, LARS V/IN

=> s e4 or e5

             1 "BROCIA, ROBERT"/IN
             6 "BROCIA, ROBERT W"/IN
L3           7 "BROCIA, ROBERT"/IN OR "BROCIA, ROBERT W"/IN

=> d 1-17 cit

      7 ANSWERS ARE AVAILABLE. SPECIFIED ANSWER NUMBER EXCEEDS ANSWER SET
SIZE
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1. 5,770,355, Jun. 23, 1998, Heart disease test kit and method of determining a heart disease risk factor and efficacy of a treatment for heart disease; **Robert W. Brocia**, 435/4, 15, 23, 975; 436/13, 63, 71, 74, 149, 542 [IMAGE AVAILABLE]

2. 5,618,683, Apr. 8, 1997, Diagnostic kit for cholesteryl ester transfer protein (CETP) activity measurement and a new synthetic particle used therein; **Robert W. Brocia**, et al., 435/11, 4, 7.9, 7.92, 810, 975; 436/809, 817, 829; 514/2 [IMAGE AVAILABLE]

3. 5,585,235, Dec. 17, 1996, Fluorescent assay and method that corrects for spectral interference; **Robert W. Brocia**, 435/4, 7.9, 7.92, 11, 810, 975; 436/809, 817, 829; 514/2 [IMAGE AVAILABLE]

4. 5,459,567, Oct. 17, 1995, Method for determining the degree of spectral interference in an assay having a test sample; **Robert W. Brocia**, 356/318; 250/458.1, 459.1; 356/417 [IMAGE AVAILABLE]

5. 5,331,327, Jul. 19, 1994, Radar detector performance verification method and apparatus; **Robert W. Brocia**, et al., 342/173, 20 [IMAGE AVAILABLE]

6. 5,191,348, Mar. 2, 1993, Radar detector performance verification method and apparatus; **Robert W. Brocia**, et al., 342/173, 20 [IMAGE AVAILABLE]

7. 4,973,949, Nov. 27, 1990, Dual wheatstone bridge strain gage marine intrusion sensor; **Robert Brocia**, 340/666; 73/862.622, 862.628; 340/984 [IMAGE AVAILABLE]

Gitomer
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=> fil reg; d que l1; fil ca,caplus; d que l32

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- key terms

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L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "CHOLESTERYL ESTER TRAN
                 SFER PROTEIN (HUMAN CLONE .LAMBDA.CETP.10/.LAMBDA.CETP.30
                 7)"/CN


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L1             1 SEA FILE=REGISTRY ABB=ON  PLU=ON  "CHOLESTERYL ESTER TRAN
                 SFER PROTEIN (HUMAN CLONE .LAMBDA.CETP.10/.LAMBDA.CETP.30
                 7)"/CN
L6           844 SEA (L1 OR CETP OR CHOLESTERYL ESTER)(5A)(MEAS? OR CALC##
                  OR CALCUL? OR QUANT? OR DETERM? OR DET## OR DETECT?)
L7           190 SEA L6(S) ACTIVIT?
L32           30 SEA L7 AND (DONOR OR FLUORESC?(S) LIPID OR LIGHT)

=> dup rem l32

PROCESSING COMPLETED FOR L32
L34           15 DUP REM L32 (15 DUPLICATES REMOVED)

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L34  ANSWER 1 OF 15  CA  COPYRIGHT 1998 ACS              DUPLICATE 1
                         Searcher  :  Shears   308-4994
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AN 126:233448 CA
TI Comparison in effects of simvastatin (S), cholebrine (C), bezafibrate (B), and probucol (P) on plasma lipoprotein subfractions
AU Homma, Yasuhiko; Kobayashi, Toshio; Yamaguchi, Hiroshi; Ozawa, Hideki; Sakane, Hiroya
CS Dep. Intern. Med., Tokai Univ. Oiso Hosp., Kanagawa, Japan
SO Domyaku Koka (1997), 24(9), 481-486
CODEN: DOMKDM; ISSN: 0386-2682
PB Nippon Domyaku Koka Gakkai
DT Journal
LA Japanese
AB Effects of 12 wk treatment with S, a bile acid sequestrant (C), B, or P were compared in 32, 16, 30, and 22 patients with hyperlipoproteinemia. Plasma levels of lipoprotein subfraction-cholesterol (C), and **activities** of LCAT and **CETP** were **measured** at 0 and 12 wk. LDL receptor activities in lymphocytes cultured in lipoprotein-deficient medium were also assayed. S, B, and P reduced plasma levels of VLDL-C and IDL-C, but C did not. S, C, and P reduced plasma levels of LDL1-C, but B did not. S and B reduced plasma levels of LDL2-C, but C and P did not change. P markedly reduced plasma levels of HDL2-C, but S, C, and B did not change them. B increased plasma levels of HDL3-C and P decreased them. S and B decreased the cholesterol esterification rate, but C and P did not change. P markedly increased CETP activities and S and B decreased them. LDL receptor activities pos. correlated with the drug-induced redn. of LDL-C and LDL1-C. We conclude that the redn. of plasm levels of large, **light** LDL by drug treatment is mainly regulated by LDL receptor activities and the redn. of LDL1 by drug treatment is more prominent in patients with lower LDL receptor activities.

L34 ANSWER 2 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 2
AN 126:262574 CA
TI Increased plasma cholesteryl ester transfer activity in obese children
AU Hayashibe, Hidemasa; Asayama, Kohtaro; Nakane, Takaya; Uchida, Norihiko; Kawada, Yasusuke; Nakazawa, Shinpei
CS Department of Pediatrics, Yamanashi Medical University, 1110 Shimokato, Tamahocho, Nakakoma, Yamanashi, 409-38, Japan
SO Atherosclerosis (Shannon, Irel.) (1997), 129(1), 53-58
CODEN: ATHSBL; ISSN: 0021-9150
PB Elsevier
DT Journal
LA English
AB To **det.** whether enhanced **activity** of **cholesteryl ester** transfer protein (CETP) contributes to the development of atherogenic lipoprotein profiles in obese children, plasma CETP **activity** was assayed according to a micro-method, by co-incubating lipoprotein-deficient

samples with exogenous **donor** and acceptor lipoproteins. The study subjects were 31 obese children (14 males and 17 females). Serum levels of triglycerides, total cholesterol (TC), low-d. lipoprotein cholesterol (LDL-C), TC:high-d. lipoprotein (HDL)-C, LDL-C:HDL-C, apolipoprotein (apo) B, and apo B:apo A1 were increased in obese children. Thus they appeared to exhibit an atherogenic lipoprotein profile, with a relative decrease in cholesterol carried by HDL compared with the cholesterol in the other lipoprotein fractions. The mean fasting plasma insulin level was also increased. CETP activity was significantly higher in the obese children than in nonobese control children, and was correlated with LDL-C, TC:HDL-C, LDL-C:HDL-C, and apo B:apo A1. These results suggest that an increase in plasma CETP activity results in atherogenic change in lipoprotein metab. in obese children. The increase in CETP may be due to the adiposity or insulin resistance. Alternatively, dyslipidemia per se, phys. inactivity or excessive fat intake, that are commonly found in obese children, may contribute to the increase in CETP activity.

L34 ANSWER 3 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 3
AN 126:101455 CA
TI Fluorescent assay and method that corrects for spectral interference
IN Brocia, Robert W.
PA Diagnescent Technologies, Inc., USA
SO U.S., 16 pp. Cont.-in-part of U.S. Ser. No. 46,772.
CODEN: USXXAM
PI US 5585235 A 961217
AI US 93-148731 931029
PRAI US 93-46772 930413
DT Patent
LA English
AB A method is provided for **measuring** the **activity** of **cholesteryl ester** transfer protein or MTP. The method comprises the steps of: adding a prepd. emulsion particle to a buffer to form a buffered soln. simulating physiol. conditions, adding an emulsion of **lipid** to the buffered soln. of prepd. sonicated particle, adding a source of CETP or MTP to the buffered soln., adding a compd. to the buffered soln. for the purpose of testing the compd.'s effect on the neutral **lipid** transfer protein (CETP or MTP) activity, incubating the buffered mixt., reading the **fluorescence** of the soln., and calcg. the effect of the compd. on the emission spectra of the transfer label so transfer activity can than be accurately detd. A device that **dets**. the **activity** of **CETP** or MTP by the use of a newly synthesized **donor** particle without regard to the presence of colored or otherwise interfering factors. A system comprises a **donor** particle comprised of a self quenching **fluorescent** neutral **lipid** core, an acceptor particle to accept protein facilitated transfer of

fluorescent neutral **lipid**, and detg. interference on the emission intensity of the **fluorescence** of the particles.

L34 ANSWER 4 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 4
AN 127:92385 CA
TI A simple purification of apolipoproteins A-I and B and their application to cholesteryl ester transfer assay
AU Cho, Kyung-Hyun; Choi, Myung-Sook; Bok, Song-Hae; Park, Yong Bok
CS Dept. of Genetic Engineering, Kyungpook National University, Taegu, 702-701, S. Korea
SO J. Food Sci. Nutr. (1996), 1(1), 87-92
CODEN: JFSNFW; ISSN: 1226-332X
PB Korean Society of Food Science and Nutrition
DT Journal
LA English
AB This study describes a stable and simple method for the **measurement** of **cholesteryl ester** transfer protein (**CETP**) **activities** using reconstituted HDL and LDL as substrates. Apolipoproteins(apo) A-I and -B were purified from hog plasma by a new strategy without ultracentrifugation and delipidation. A simple two-step column chromatog. was administered. In the first step of phenyl-sepharose CL-4B column chromatog., hydrophobic plasma proteins were isolated. The most hydrophobic proteins bound to the column appeared to be apo A-I and apo-B. Contaminant proteins were efficiently eliminated from the sample by washing the column with 0.3M NaCl contg. buffer after loading the plasma on the column. Two pure proteins showing each single band on SDS-PAGE of apo A-I and apo-B were individually obtained by a subsequent gel filtration column chromatog.(Sephadex G-200). This two-step purifn. was simple and inexpensive compared to the ultracentrifugation and/or delipidation method that are most commonly used. Reconstituted high-d. lipoproteins(HDL) and low-d. lipoproteins(LDL) were prepd. using the purified apo A-I and -B, resp. When these artificially prepd. HDL and LDL were used in the assays for CETP as the cholesteryl ester(CE) **donor** and acceptor resp., the specific transfer of CE increased up to two fold compared to that used the native HDL and LDL.

L34 ANSWER 5 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 5
AN 123:250658 CA
TI A fluorescent assay and method that corrects for spectral interference
IN Brocia, Robert W.
PA Diagnescent Technologies, Inc., USA
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
PI WO 9522621 A1 950824
DS W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB,

GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
AI WO 94-US11703 941014
PRAI US 93-148731 931029
DT Patent
LA English
AB A method for measuring the activity of cholesterol ester transfer protein or MTP by calcg. the effect of the compd. on the emission spectra of the transfer label so transfer activity can then be accurately detd. is provided. The figure shows a synthetic or synthesized particle (32) which is a representative of an emulsion. A device that **dets.** the **activity** of **CETP** or MTP by the use of a newly synthesized **donor** particle without regard to the presence of colored or otherwise interfering factors for use in this invention is claimed. A system comprising a **donor** particle comprised of a self-quenching **fluorescent** facilitated transfer or **fluorescent** neutral **lipid**, and detg. interference on the emission intensity of the **fluorescence** of the particles is claimed.

L34 ANSWER 6 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 6
AN 123:28903 CA
TI Immunospecific scintillation proximity assay of cholesteryl ester transfer protein activity
AU Lagrost, Laurent; Loreau, Nadine; Gambert, Philippe; Lallemant, Christian
CS Laboratoire Biochimie Lipoproteines, Faculte Medecine, Dijon, Fr.
SO Clin. Chem. (Washington, D. C.) (1995), 41(6, Pt. 1), 914-19
CODEN: CLCHAU; ISSN: 0009-9147
DT Journal
LA English
AB The authors describe a novel, immunospecific scintillation proximity assay for **detg. cholesteryl ester** transfer protein (**CETP**) **activity** in total human serum and in reconstituted exptl. mixts. The assay is based on the measurement of radiolabeled cholesteryl esters transferred from a tracer dose of biosynthetically labeled high-d. lipoprotein subfraction 3 to unlabeled apolipoprotein (apo) B-contg. lipoproteins. The radioactivity content of the apo B-contg. lipoprotein fraction can be evaluated without sepg. the **donor** from the acceptor lipoprotein substrates and is measured through the formation of ternary complexes involving the radiolabeled apo B-contg. lipoproteins, specific anti-apo B antibodies from sheep, and anti-sheep antibody-labeled fluoromicrospheres. Good correspondences were obsd. between CETP activity values obtained either with the ultracentrifugation method or the immunospecific scintillation proximity assay (r = 0.93). Because of its potential for automation, the immunospecific

scintillation proximity assay may constitute a convenient tool to **measure** serum **CETP activity** in the clin. lab.

L34 ANSWER 7 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 7
AN 122:310380 CA
TI The cell membrane of Mycoplasma penetrans: lipid composition and phospholipase A1 activity
AU Salman, Michael; Rottem, Shlomo
CS Department of Membrane and Ultrastructure Research, The Hebrew University-Hadassah Medical School, P.O. Box 12272, Jerusalem, 91120, Israel
SO Biochim. Biophys. Acta (1995), 1235(2), 369-77
CODEN: BBACAQ; ISSN: 0006-3002
DT Journal
LA English
AB Anal. of Mycoplasma penetrans membrane lipids revealed that, in addn. to large amts. of unesterified cholesterol, M. penetrans incorporated exogenous phospholipids, preferentially sphingomyelin, from the growth medium. The major phospholipids synthesized de novo by M. penetrans were phosphatidylglycerol (PG) and diphosphatidylglycerol (DPG). In vivo labeling of PG and DPG by growing the cells with radioactive palmitate or oleate, followed by snake venom phospholipase A2 treatment, enabled us to assess the positional distribution of fatty acids in these lipids. Satd. fatty acids were found preferentially in position 2 of the glycerol backbone, and not in position 1 as found elsewhere in nature, while unsatd. fatty acids prefer position 1. M. penetrans membranes contain phospholipase activity of the A1 type, removing a fatty acid from the sn-1 ester bond of phospholipids. The activity was neither stimulated by Ca2+ nor inhibited by EGTA and had a broad pH spectrum. The substrate specificity of the enzyme was investigated with various natural **lipids** and with a **fluorescent** analog of the phosphatidylcholine. The enzyme was equally active toward phosphatidylcholine and phosphatidylglycerol, but did not hydrolyze diphosphatidylglycerol. The enzyme did not act on triacylglycerol, diacylglycerol or **cholesteryl ester**, but low **activity** was **detected** toward monoacylglycerol. The enzyme was heat-sensitive and detergent-sensitive, and was almost completely inhibited by p-bromophenacylbromide (50 .mu.M), but was not affected by SH reagents. This study is the first one reporting phospholipase A1 activity in Mollicutes. A possible role of this enzyme in forming lipid mediators upon the interaction of M. penetrans cells with eukaryotic cells is suggested.

L34 ANSWER 8 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 8
AN 123:164371 CA
TI Method for **measuring** the **activities** of

cholesteryl ester transfer protein (lipid transfer protein)

AU Epps, D. E.; Harris, J. S.; Greenlee, K. A.; Fisher, J. F.; Marschke, C. K.; Castle, C. K.; Ulrich, R. G.; Moll, T. S.; Melchior, G. W.; et al.

CS Upjohn Laboratories, 7000 Portage Road, Kalamazoo, MI, 49001, USA

SO Chem. Phys. Lipids (1995), 77(1), 51-63
CODEN: CPLIA4; ISSN: 0009-3084

DT Journal

LA English

AB A continuous recording fluorescence assay was developed for cholesteryl ester transfer protein (CETP). The assay measures the increase in **fluorescence** accompanying the relocation of **fluorescent lipids**, cholesteryl esters and triglycerides, from a **donor** emulsion to an acceptor emulsion. In the absence of CETP, the quantum yields of the **fluorescent lipids** is low because their high concns. in the **donor** emulsions result in self-quenching. CETP catalyzes the redistribution of the **fluorescent lipids** from the **donor** to the acceptor emulsions and **fluorescence** increases substantially. Efficient sonication and incorporation of apolipoproteins from human HDL into the emulsions significantly increased the transfer rates. Under optimal conditions, the redistribution of fluorescent compds. reaches equil. within <30 min and the kinetics of this process are consistent with a simple, first-order reaction pathway.

L34 ANSWER 9 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 9

AN 122:50739 CA

TI Diagnostic kit for **cholesteryl ester** transfer protein (**CETP**) **activity** fluorescent **measurement**, and a new synthetic particle used therein

IN Brocia, Robert Wellstood; Swenson, Theresa Lynn

PA Diagnescent Technologies, Inc., USA

SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2

PI WO 9424567 A1 941027

DS W: AU, BR, CA, CN, FI, JP, KR, NO, NZ, RU
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE

AI WO 94-US3929 940411

PRAI US 93-46772 930413

DT Patent

LA English

AB A diagnostic device is provided that **dets.** the **activity.** of **CETP** by the use of a new synthetic **donor** particle. The method in the diagnostic device for **measuring** the **activity** of **cholesteryl ester** transfer protein comprises adding a prepd. sonicated particle to a buffer to form a buffered soln., adding an Intralipid

emulsion to the buffered soln. for the purpose of accepting the transfer of neutral **lipid**, adding cholesteryl ester transfer protein to the buffer soln., and reading the **fluorescence** of the buffer soln. to **measure** the **activity** of the **cholesteryl ester** transfer protein. In a preferred embodiment, the fluorescent N-(7-nitrobenz-2-oxa-1,3-diazol-4-yl)amino group (NBD) is covalently bonded to cholesteryl ester to form NBD-CE. The transfer process includes the CETP interacting with the prepd. synthetic NBD-CE emulsion and shuttles NBD-CE mols. away from the core of the emulsion. The CETP releases the NBD-CE to an acceptor particle. The fluorescence intensity of the NBD-CE increases as the NBD-CE is moved from the synthetic HDL-type sonicated emulsion to the acceptor particle.

L34 ANSWER 10 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 10
AN 121:30394 CA
TI A new in vitro method for the simultaneous evaluation of cholesteryl ester exchange and mass transfer between HDL and apoB-containing lipoprotein subspecies: identification of preferential cholesteryl ester acceptors
AU Guerin, Maryse; Dolphin, Peter J.; Chapman, M. John
CS Hop. Pitie, Paris, Fr.
SO Arterioscler. Thromb. (1994), 14(2), 199-206
CODEN: ARTTE5; ISSN: 1049-8834
DT Journal
LA English
AB To date, several methods have been developed to det. the activity of plasma lipid transfer proteins. These methods have largely involved the addn. of the transfer protein in question to labeled substrates, followed by prolonged incubation (4-18 h) and subsequent evaluation of the radioactivity transferred to pptd. low-d. lipoprotein (LDL). While adequate for **detg.** the **activity** of **cholesteryl ester** transfer protein (CETP), these methods generally do not take into account the compn. or levels of lipoproteins present within a given individual plasma because pools of high-d. lipoprotein (HDL) are labeled and used for the transfer expts. Both the direction and the extent of lipid transfer are dependent on the compn. and relative abundance of both **donor** and acceptor particles as well as the activity of the lipid transfer protein(s). Here, the authors describe a new method for the detn. of the capacity of plasma samples to facilitate cholesteryl ester transfer from HDL to LDL and very-low-d. lipoprotein (VLDL), a method that has several advantages. First, the subject's HDL is labeled and used for transfer. Second, the labeled HDL, in a quantity equiv. to 1% of the plasma HDL mass, is added to the subject's plasma, and therefore the relative abundance of both **donor** and acceptor particles is preserved at their physiol. levels. Third, both cholesteryl ester mass and radioactivity are

detd., allowing the net mass transfer of cholesteryl ester and cholesteryl ester exchange to be quantified sep. Fourth, the application of an ultracentrifugal d. gradient for the subsequent reisolation of the lipoproteins permits estn. of the transfer of cholesteryl esters to various subfractions of LDL; such measurement is not possible when pptn. techniques are used to det. total LDL radioactivity. The method allows estn. of the total physiol. capacity of a plasma sample to mediate cholesteryl ester transfer, which may represent a more relevant **measurement** than that of **CETP activity** alone. Cholesteryl ester exchange and mass transfer were detd. in 4 normolipidemic and 2 moderately hypertriglyceridemic subjects by this new in vitro method. Net transfer of cholesteryl ester from HDL to VLDL was increased 2-fold in mildly hypertriglyceridemic subjects (triglycerides >100 and <150 mg/dL). Cholesteryl ester mass transfer predominated for the first 6 h of incubation, after which cholesteryl ester exchange predominated. The authors' data indicated that on a quant. basis VLDL and the **light** LDL subspecies (LDL1, d=1.019 to 1.023 g/mL) are preferential cholesteryl ester acceptors among the apolipoprotein B-contg. lipoproteins.

L34 ANSWER 11 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 11
AN 120:3825 CA
TI Use of fluorescent cholesteryl ester microemulsions in cholesteryl ester transfer protein assays
AU Bisgaier, Charles L.; Minton, Laura L.; Essenburg, Arnold D.; White, Andrew; Homan, Reynold
CS Dep. Pharmacol., Parke-Davis Pharm. Res., Ann Arbor, MI, 48105, USA
SO J. Lipid Res. (1993), 34(9), 1625-34
CODEN: JLPRAW; ISSN: 0022-2275
DT Journal
LA English
AB In the present report the authors describe a simple and practical method to assess CETP activity in a defined system by use of microemulsions contg. a fluorescent cholesteryl ester analog. The microemulsions are stable, simple to prep., and can be made to defined compn. Initial transfer rates are easily detd. by monitoring changes in fluorescence. The authors have used the fluorescent cholesteryl ester analog, cholesteryl 4,4-difluoro-5,7-dimethyl-4-bora-3.alpha.,4.alpha.-diaza-3-indacenedodecanoate (BODIPY-CE), to demonstrate the utility of this assay. The assay takes advantage of the concn.-dependent self-quenching of BODIPY-CE, when this analog is incorporated into microemulsions. The authors have used this new assay to demonstrate **fluorescent lipid** transfer facilitated by rabbit and human d>1.21 g/mL plasma fraction and recombinant human CETP. A known inhibitory monoclonal antibody (Mab) to human CETP blocked PODIPY-CE transfer in a dose-dependent manner. The authors have

also used BODIPY-CE microemulsions to **measure CETP activity** in whole plasma.

L34 ANSWER 12 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 12
AN 118:231433 CA
TI Composition of human low density lipoprotein: effects of postprandial triglyceride-rich lipoproteins, lipoprotein lipase, hepatic lipase and cholesteryl ester transfer protein
AU Karpe, Fredrik; Tornvall, Per; Olivecrona, Thomas; Steiner, George; Carlson, Lars A.; Hamsten, Anders
CS King Gustaf V Res. Inst., Karolinska Hosp., Stockholm, S-10 401, Swed.
SO Atherosclerosis (Shannon, Irel.) (1993), 98(1), 33-49
CODEN: ATHSBL; ISSN: 0021-9150
DT Journal
LA English
AB A preponderance of small, dense low d. lipoprotein (LDL) particles has been linked to increased risk of myocardial infarction, and a dense and protein-rich LDL has proved to be a characteristic of patients with manifest coronary heart disease (CHD). The present study focused on metabolic determinants of the LDL subfraction distribution with the emphasis placed on alimentary lipemia. The relations of plasma levels and compn. of **light** (1.019 < d < 1.040 kg/L) and dense (1.040 < d < 1.063 kg/L) LDL subfractions to postprandial triglyceride-rich lipoproteins (TGRL), postheparin plasma lipase activities and the activity of cholesteryl ester transfer protein (CETP) were studied in 32 men with angiog. ascertained premature coronary atherosclerosis (age 48.8 yr) and in 10 age matched healthy control men. LDL subfractions were sepd. by equil. d. gradient ultracentrifugation of fasting plasma drawn before participants were subjected to an oral fat tolerance test of a mixed meal type. The response of TGRL to the oral fat load was detd. by measuring plasma triglycerides, and the apolipoprotein (apo) B-48 and apo B-100 content of Sf 60-400 and Sf 20-60 lipoprotein fractions. At a second visit plasma samples were taken for detn. of postheparin plasma lipoprotein lipase (LPL) and hepatic lipase (HL) **activities** and for **measurement** of **CETP activity**. Hypertriglyceridemic patients had a preponderance of dense LDL particles compared with normotriglyceridemic patients and controls. The magnitude of the response of TGRL to the oral fat load showed a pos. assocn. with the dense LDL apo B concn. (r = 0.32-0.52), whereas the LPL activity correlated pos. with the free (r = 0.50) and esterified cholesterol (r = 0.45) and apo B (r = 0.42) content of the **light** LDL fraction. The HL activity was found to be inversely assocd. with the plasma level of **light** LDL triglycerides (r = -0.38). In contrast, no relations were noted between CETP activity and plasma concns. of LDL constituents. Multiple stepwise linear regression anal. with the proportion of total LDL apo B contained in

the dense LDL subfraction (% dense LDL apo B) used as the dependent variable indicated that the combined effect of LPL activity and postprandial plasma levels of TGRL (areas under the curve for plasma triglycerides or Sf 60-400 apo B-48) accounted for around 50% of the variability in the distribution of LDL particles between **light** and dense subfractions. The present data suggest that LPL activity and the response of TGRL to fat intake are major determinants of LDL heterogeneity.

L34 ANSWER 13 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 13
AN 106:172326 CA
TI **Cholesteryl ester** transfer **activity** in plasma **measured** by using solid-phase-bound high-density lipoprotein
AU Sparks, D. L.; Frohlich, J.; Cullis, P.; Pritchard, P. H.
CS Dep. Pathol., Univ. British Columbia, Vancouver, BC, V5Z 4H4, Can.
SO Clin. Chem. (Winston-Salem, N. C.) (1987), 33(3), 390-3
CODEN: CLCHAU; ISSN: 0009-9147
DT Journal
LA English
AB The ability was studied of lipid-transfer factors in plasma to promote transfer, to endogenous lipoproteins, of [3H]cholesteryl ester from high-d. lipoprotein (HDL) covalently bound to Sepharose 4B beads. After incubation for 2 hh at 37.degree., 12-14% of the [3H]cholesteryl ester had been transferred to the lipoproteins of the plasma, in the proportions 57% to HDL and 43% to low- and very-low-d. lipoproteins. This process was a function of the amt. of plasma present and was stimulated by addn. of partly purified lipid-transfer protein. Transfer also depended on the concn. of **donor** HDL but was independent of the amt. of acceptor lipoprotein. This simple evaluation of cholesteryl ester transfer does not require removal of lipoproteins from the plasma before incubation.

L34 ANSWER 14 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 14
AN 104:126002 CA
TI Improved estimation of cholesteryl ester transfer/exchange activity in serum or plasma
AU Groener, J. E. M.; Pelton, R. W.; Kostner, G. M.
CS Inst. Med. Biochem., Univ. Graz, Graz, A-8010, Austria
SO Clin. Chem. (Winston-Salem, N. C.) (1986), 32(2), 283-6
CODEN: CLCHAU; ISSN: 0009-9147
DT Journal
LA English
AB This simple, routine assay for **measuring** **cholesteryl ester** transfer/exchange **activity** in human plasma is based on the removal of interfering lipoproteins, i.e., very-low-d. lipoproteins and low-d. lipoproteins (LDL), by pptn. with PEG. High-d. lipoproteins (HDL)

in the samples do not affect the results. The supernate after pptn. is mixed with [14C]cholesteryl ester-labeled LDL as **donor** and with HDL as the acceptor for the cholesteryl ester. After incubation for 16 h at 37.degree., LDL is sepd. from HDL by pptn. with dextran sulfate, and the radioactivity measured in the supernate, which contains the HDL. The assay is applicable to samples contg. as much as 10 mmol triglycerides/L. The within-assay relative std. deviation is 2.7%, the day-to-day relative std. deviation 6.8%. Results compared well with those by conventional procedures.

L34 ANSWER 15 OF 15 CA COPYRIGHT 1998 ACS DUPLICATE 15
AN 103:209744 CA
TI Activation of phosphatidylcholine-sterol acyltransferase by human apolipoprotein E isoforms
AU Steinmetz, Armin; Kaffarnik, Hans; Utermann, Gerd
CS Inst. Humangenet., Philipps-Univ. Marburg, Marburg, D-3500, Fed. Rep. Ger.
SO Eur. J. Biochem. (1985), 152(3), 747-51
CODEN: EJBCAI; ISSN: 0014-2956
DT Journal
LA English
AB Phosphatidylcholine-sterol acyltransferase (EC 2.3.1.43) requires a protein activator. Several human apolipoproteins exhibited an activator function; the major effector was apolipoprotein A-I. Human apolipoprotein E exists in the population mainly in 3 different genetic isoforms: apolipoprotein E-2, E-3, and E-4. These isopeptides were isolated from subjects homozygous for 1 of the isoforms, incorporated into phospholipid/cholesterol/[14C]cholesterol complexes by the cholate dialysis procedure and used to measure capacity to activate phosphatidylcholine-sterol acyltransferase in comparison to apolipoprotein A-I-lipid substrate particles prepd. by the same procedure. Acyltransferase **activity** was **measured** by the formation of [14C]**cholesteryl ester** from [14C]cholesterol with purified enzyme. With egg yolk phosphatidylcholine as acyl **donor**, apo E was 15-19% as efficient as apolipoprotein A-I for activation of the acyltransferase. Apo-E-stimulated cholesteryl ester formation was enhanced when 1-oleoyl-2-palmitoyl-glycerophosphocholine was used as substrate (45% of apo A-I/phosphatidylcholine control) and most pronounced with dimyristoylglycerophosphocholine (75% of apo A-I/phosphatidylcholine control). No significant difference in activation was found between apo E isoforms. Thus, apolipoprotein E activates phosphatidylcholine-sterol acyltransferase in vitro, and apolipoprotein E isoforms are similarly effective.

=> d his 136

(FILE 'USPATFULL' ENTERED AT 11:48:31 ON 09 JUN 1998)
L36 10 S L32

=> d 1-10 bib abs

L36 ANSWER 1 OF 10 USPATFULL
AN 1998:57968 USPATFULL
TI Carboxyalkylethers, formulations, and treatment of vascular diseases
IN Bisgaier, Charles Larry, Ann Arbor, MI, United States
Creger, Paul Leroy, Ann Arbor, MI, United States
Saltiel, Alan Robert, Ann Arbor, MI, United States
Tafuri, Sherrie Rae, Dexter, MI, United States
PA Warner-Lambert Company, Morris Plains, NJ, United States (U.S. corporation)
PI US 5756544 980526
AI US 97-806582 970225 (8)
RLI Division of Ser. No. US 95-409780, filed on 24 Mar 1995, now patented, Pat. No. US 5648387
DT Utility
EXNAM Primary Examiner: Shippen, Michael L.
LREP Ashbrook, Charles W.
CLMN Number of Claims: 6
ECL Exemplary Claim: 1
DRWN 40 Drawing Figure(s); 23 Drawing Page(s)
LN.CNT 847
AB Dialkyl ethers lower Lp(a) and triglycerides, and elevate HDL-cholesterol, and are thereby useful for treating vascular diseases and noninsulin-dependent diabetes mellitus.

L36 ANSWER 2 OF 10 USPATFULL
AN 1998:51645 USPATFULL
TI Carboxyalkylethers, formulations, and treatment of vascular diseases
IN Bisgaier, Charles Larry, Ann Arbor, MI, United States
Creger, Paul Leroy, Ann Arbor, MI, United States
Saltiel, Alan Robert, Ann Arbor, MI, United States
Tafuri, Sherrie Rae, Dexter, MI, United States
PA Warner-Lambert Company, Morris Plains, NJ, United States (U.S. corporation)
PI US 5750569 980512
AI US 97-805533 970225 (8)
RLI Division of Ser. No. US 95-409780, filed on 24 Mar 1995, now patented, Pat. No. US 5648387
DT Utility
EXNAM Primary Examiner: Shippen, Michael L.
LREP Ashbrook, Charles W.

CLMN Number of Claims: 8
ECL Exemplary Claim: 1
DRWN 40 Drawing Figure(s); 23 Drawing Page(s)
LN.CNT 860
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB Dialkyl ethers lower Lp(a) and triglycerides, and elevate HDL-cholesterol, and are thereby useful for treating vascular diseases and noninsulin-dependent diabetes mellitus.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L36 ANSWER 3 OF 10 USPATFULL
AN 1998:33902 USPATFULL
TI Peptides and proteins, process for their preparation and their use as cholesterol acceptors
IN Rosseneu, Maryvonne, Brugge, Belgium
Brasseur, Robert, Haillot, Belgium
Deleys, Robert, Grimbergen, Belgium
Labeur, Christine, Brugge, Belgium
PA N.V. Innogenetics, S.A., Ghent, Belgium (non-U.S. corporation)
PI US 5733879 980331
WO 9325581 931223
AI US 94-351423 941223 (8)
WO 93-EP1444 930608
941223 PCT 371 date
941223 PCT 102(e) date
PRAI EP 92-401621 920612
DT Utility
EXNAM Primary Examiner: Tsang, Cecilia J.; Assistant Examiner: Touzeau, Lynn
LREP Nixon & Vanderhye, P.C.
CLMN Number of Claims: 29
ECL Exemplary Claim: 1
DRWN 24 Drawing Figure(s); 24 Drawing Page(s)
LN.CNT 1289
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB The subject invention relates to amino acid sequences derived from peptide (Glu.sup.1,8, Leu.sup.11,17) 18A, comprising:

Glu-Trp-Leu-A-Ala-B-Tyr-C-Lys-Val-D-Glu-Lys-Leu-Lys-Glu-Leu-Phe,

wherein A is Lys, Glu or Asp; B is Phe, Glu or Asp; C is Glu, Lys or Arg;

and D is Leu, Glu or Asp. The amino acid sequences form complexes with phospholipids, and are useful for the treatment of cardiovascular disease.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L36 ANSWER 4 OF 10 USPATFULL
AN 1998:1674 USPATFULL
TI CETP Ribozymes
IN Couture, Larry, Louisville, CO, United States
Stinchcomb, Dan, Boulder, CO, United States
McSwiggen, James, Boulder, CO, United States
Bisgaier, Charles, Ann Arbor, MI, United States
Pape, Michael, Ann Arbor, MI, United States
PA Ribozyme Pharmaceuticals, Inc., Boulder, CO, United States (U.S. corporation)
Warner-Lambert Company, Ann Arbor, MI, United States (U.S. corporation)
PI US 5705388 980106
AI US 94-363240 941223 (8)
DT Utility
EXNAM Primary Examiner: LeGuyader, John L.
LREP Lyon & Lyon LLP
CLMN Number of Claims: 14
ECL Exemplary Claim: 1,10,11
DRWN 10 Drawing Figure(s); 6 Drawing Page(s)
LN.CNT 2976
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A nucleic acid molecule which blocks synthesis and/or expression of mRNAs associated with initial development, progression or regression of vascular disease.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L36 ANSWER 5 OF 10 USPATFULL
AN 97:61718 USPATFULL
TI Carboxyalkylethers, formulations, and treatment of vascular diseases
IN Bisgaier, Charles Larry, Ann Arbor, MI, United States
Creger, Paul Leroy, Ann Arbor, MI, United States
Saltiel, Alan Robert, Ann Arbor, MI, United States
Tafuri, Sherrie Rae, Dexter, MI, United States
PA Warner-Lambert Company, Morris Plains, NJ, United States (U.S. corporation)
PI US 5648387 970715
AI US 95-409780 950324 (8)
DT Utility
EXNAM Primary Examiner: Shippen, Michael L.
LREP Ashbrook, Charles W.
CLMN Number of Claims: 21
ECL Exemplary Claim: 1
DRWN 40 Drawing Figure(s); 23 Drawing Page(s)
LN.CNT 869
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB Dialkyl ethers lower Lp(a) and triglycerides, and elevate HDL-cholesterol, and are thereby useful for treating vascular diseases and noninsulin-dependent diabetes mellitus.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L36 ANSWER 6 OF 10 USPATFULL
AN 97:29342 USPATFULL
TI Diagnostic kit for **cholesteryl ester** transfer protein (**CETP**) **activity measurement** and a new synthetic particle used therein
IN Brocia, Robert W., 15 Moore Rd., Bronxville, NY, United States 10708
Swenson, Theresa L., 445 E. 68th St., Apt. 8B, New York, NY, United States 10021
PI US 5618683 970408
AI US 93-46772 930413 (8)
DT Utility
EXNAM Primary Examiner: Kight, John; Assistant Examiner: Leary, Louise N.
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 561
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A diagnostic device is provided that **determines** the **activity** of **CETP** by the use of a new synthesized **donor** particle. The method in the diagnostic device for **measuring** the **activity** of **cholesteryl ester** transfer protein comprises: adding a prepared sonicated particle to a buffer to form a buffered solution, adding an Intralipid emulsion to the buffered solution for the purpose of accepting the transfer of neutral **lipid**, adding cholesteryl ester transfer protein to the buffered solution incubating the buffered solution, and reading the **fluorescence** of the buffer solution to **measure** the **activity** of the **cholesteryl ester** transfer protein. The synthesized **donor** particle is representative of a high density lipoprotein and comprises a **fluorescent** group, N-(7-nitrobenz-2-oxa-1,3-diazol-4-yl) amino-covalently bound to a cholesteryl ester to form a NBD-CE core, a monolayer of phospholipid that surrounds the NBD-CE core and an apolipoprotein apoA-I associated with the monolayer and an aqueous phase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L36 ANSWER 7 OF 10 USPATFULL
AN 97:7939 USPATFULL

TI Acyl CoA:cholesterol acyltransferase inhibitors
IN Bok, Song H., Daejeon, Korea, Republic of
Jeong, Tae S., Daejeon, Korea, Republic of
Kim, Sung U., Daejeon, Korea, Republic of
Kwon, Byoung M., Daejeon, Korea, Republic of
Kim, Young K., Daejeon, Korea, Republic of
Son, Kwang H., Daejeon, Korea, Republic of
Lee, Hang W., Daejeon, Korea, Republic of
Kwon, Yong K., Daejeon, Korea, Republic of
PA Korea Institute of Science and Technology, Seoul, Korea, Republic of (non-U.S. corporation)
PI US 5597835 970128
AI US 94-320708 941007 (8)
PRAI KR 93-20886 931008
DT Utility
EXNAM Primary Examiner: Fan, Jane
LREP Anderson, Kill & Olick P.C.
CLMN Number of Claims: 3
ECL Exemplary Claim: 1
DRWN 2 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 493
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A novel ACAT inhibitor of formula (I) useful for the treatment of hyperlipidemia produced from Aspergillus fumigatus FM-F-37; derivatives of said ACAT inhibitor, which are separated from the culture of A. fumigatus FM-F-37 or prepared by a chemical process, also possess ACAT inhibition property. ##STR1##

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L36 ANSWER 8 OF 10 USPATFULL
AN 96:116245 USPATFULL
TI Fluorescent assay and method that corrects for spectral interference
IN Brocia, Robert W., Bronxville, NY, United States
PA Diagnescent Technologies, Inc., Yonkers, NY, United States (U.S. corporation)
PI US 5585235 961217
AI US 93-148731 931029 (8)
RLI Continuation-in-part of Ser. No. US 93-46772, filed on 13 Apr 1993
DT Utility
EXNAM Primary Examiner: Kight, John; Assistant Examiner: Leary, Louise N.
LREP Lackenbach Siegel Marzullo Aronson & Greenspan, PC
CLMN Number of Claims: 39
ECL Exemplary Claim: 1
DRWN 10 Drawing Figure(s); 7 Drawing Page(s)
LN.CNT 751
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A method is provided for **measuring** the **activity** of **cholesteryl ester** transfer protein or MTP. The method comprises the steps of: adding a prepared emulsion particle to a buffer to form a buffered solution simulating physiological conditions, adding an emulsion of **lipid** to the buffered solution of prepared sonicated particle, adding a source of CETP or MTP to the buffered solution, adding a compound to the buffered solution for the purpose of testing the compound's effect on the neutral **lipid** transfer protein (CETP or MTP) **activity**, incubating the buffered mixture, reading the **fluorescence** of the solution, and calculating the effect of the compound on the emission spectra of the transfer label so transfer **activity** can than be accurately determined. A device that **determines** the **activity** of **CETP** or MTP by the use of a newly synthesized **donor** particle without regard to the presence of colored or otherwise interfering factors. A system comprises a **donor** particle comprised of a self quenching **fluorescent** neutral **lipid** core, an acceptor particle to accept protein facilitated transfer of **fluorescent** neutral **lipid**, and determining interference on the emission intensity of the **fluorescence** of the particles.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L36 ANSWER 9 OF 10 USPATFULL
AN 96:43652 USPATFULL
TI CETP inhibitor polypeptide antibodies against the synthetic polypeptide and prophylactic and therapeutic anti-atherosclerosis treatments
IN Kushwaha, Rampratap, San Antonio, TX, United States
McGill, Jr., Henry C., San Antonio, TX, United States
Kanda, Patrick, San Antonio, TX, United States
PA Southwest Foundation for Biomedical Research, San Antonio, TX, United States (U.S. corporation)
PI US 5519001 960521
AI US 95-394066 950224 (8)
RLI Continuation of Ser. No. US 93-102160, filed on 4 Aug 1993, now abandoned which is a continuation-in-part of Ser. No. US 91-811049, filed on 19 Dec 1991, now abandoned
DT Utility
EXNAM Primary Examiner: Warden, Jill; Assistant Examiner: Prickril, Benet
LREP Cox & Smith Incorporated
CLMN Number of Claims: 10
ECL Exemplary Claim: 1
DRWN 1 Drawing Figure(s); 1 Drawing Page(s)
LN.CNT 1100

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A polypeptide and analogues thereof inhibit cholesteryl ester transfer protein (CETP). An anti-atherosclerosis composition comprises an anti-atherosclerosis effective amount of the polypeptide and a pharmaceutically-acceptable carrier. An anti-atherosclerosis kit comprises in separate sterile containers at least one unit of the composition containing the polypeptide, one syringe and one needle. An antibody has specificity for the polypeptide of the invention, the baboon CETP 4 kD polypeptide inhibitor, the 1-36 amino acid N-terminal fragment of apo C-I, modified apo A-I (MW: 31 kD) or modified apo E (MW: 41 kD). A method of preventing atherosclerosis in a mammal being predisposed to that condition comprises administering to the mammal a prophylactically effective amount of the polypeptide of the invention, and a method of treating a mammal afflicted with atherosclerosis comprises the administration of a therapeutically effective amount of the polypeptide disclosed herein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L36 ANSWER 10 OF 10 USPATFULL

AN 96:36544 USPATFULL

TI CETP inhibitor polypeptide, antibodies against the synthetic polypeptide and prophylactic and therapeutic anti-atherosclerosis treatments

IN Kushwaha, Rampratap, San Antonio, TX, United States
Born, Kathleen, San Antonio, TX, United States
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PA Southwest Foundation for Biomedical Research, San Antonio, TX, United States (U.S. corporation)

PI US 5512548 960430

AI US 94-193515 940208 (8)

RLI Continuation of Ser. No. US 91-811049, filed on 19 Dec 1991, now abandoned

DT Utility

EXNAM Primary Examiner: Warden, Jill; Assistant Examiner: Prickril, Benet

LREP Cox & Smith Incorporated

CLMN Number of Claims: 10

ECL Exemplary Claim: 1

DRWN 1 Drawing Figure(s); 1 Drawing Page(s)

LN.CNT 1010

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB A polypeptide and analogues thereof inhibit cholesteryl ester transfer protein (CETP). An anti-atherosclerosis composition comprises an anti-atherosclerosis effective amount of the polypeptide and a pharmaceutically-acceptable carrier. An

anti-atherosclerosis kit comprises in separate sterile containers at least one unit of the composition containing the polypeptide, one syringe and one needle. An antibody has specificity for the polypeptide of the invention, the baboon CETP 4kD polypeptide inhibitor, the 1-36 amino acid N-terminal fragment of apo C-I, modified apo A-I (MW:31kD) or modified apo E (MW:41kD). A method of preventing atherosclerosis in a mammal being predisposed to that condition comprises administering to the mammal a prophylactically effective amount of the polypeptide of the invention, and a method of treating a mammal afflicted with atherosclerosis comprises the administration of a therapeutically affective amount of the polypeptide disclosed herein.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

=> d his l37-; d 1-25 bib abs

(FILE 'BIOSIS, MEDLINE, EMBASE, LIFESCI, BIOTECHDS, WPIDS, CONFSCI, DISSABS, SCISEARCH, JICST-EPLUS, PROMT' ENTERED AT 11:56:44 ON 09 JUN 1998)

L37 76 S L32
L38 25 DUP REM L37 (51 DUPLICATES REMOVED)

L38 ANSWER 1 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 1
AN 98:42675 BIOSIS
DN 01042675
TI Suppression of lipid transfer inhibitor protein activity by oleate: A novel mechanism of cholesteryl ester transfer protein regulation by plasma free fatty acids.
AU Morton R E; Greene D J
CS Dep. Cell Biol., NC10, Cleveland Clinic Foundation, 9500 Euclid Ave., Cleveland, OH 44195, USA
SO Arteriosclerosis Thrombosis and Vascular Biology 17 (11). 1997. 3041-3048. ISSN: 1079-5642
LA English
AB Cholesteryl ester transfer protein (CETP) mediates the interlipoprotein exchange of cholesteryl ester (CE) and triglyceride. A second plasma protein, lipid transfer inhibitor protein (LTIP), binds to lipoproteins and inhibits CETP **activity** by displacing CETP from the lipoprotein surface. Since free fatty acids (FFAs) enhance the binding of CETP to lipoproteins, we have examined the possible role of FFAs in modulating LTIP **activity**. Partially purified CETP, LTIP, and lipoproteins were incubated with 0 to 30 mu-mol/L sodium oleate, and the transfer of CE between a labeled **donor** lipoprotein and a given acceptor lipoprotein was **measured**. Without LTIP, oleate stimulated **CETP**

-mediated CE transfer between VLDL, LDL, and HDL up to threefold. This stimulation was unique in both magnitude and oleate concentration dependence for each **donor**-acceptor lipoprotein pair. In contrast to CETP **activity**, in transfer reactions involving LDL or VLDL as **donor**, LTIP **activity** was suppressed (gt 80%) by 10 to 15 mu-mol/L oleate. LTIP **activity** in transfer reactions with HDL as **donor** was less sensitive. Similar results to these were observed when lipid transfer reactions were measured in the total lipoprotein fraction isolated from FFA-enriched plasma. The FFA content of lipoproteins was strongly influenced by the concentration of FFA in plasma; lipoprotein FFA levels sufficient to suppress LTIP **activity** by 50% to 100% were achieved in plasma containing 0.8 to 1.0 mmol/L FFA. We conclude that LTIP may be functionally inactive during periods of transient elevations of plasma FFA levels, such as during postprandial lipemia or overnight fasting, or chronically suppressed in disease states or which plasma FFA levels are increased. The suppression of LTIP **activity** by FFA allows for maximum CETP-mediated lipid transfer between all lipoproteins, including lipid transfer reactions involving LDL that are normally preferentially suppressed by LTIP.

L38 ANSWER 2 OF 25 JICST-EPlus COPYRIGHT 1998 JST
AN 970227488 JICST-EPlus
TI Comparison in Effects of Simvastain(S), Cholebine(C), Bezafibrate(B), and Probucol(P) on Plasma Lipoprotein Subfractions.
AU HONMA YASUHIKO; KOBAYASHI TOSHIO; YAMAGUCHI HIROSHI; OZAWA HIDEKI; SAKANE HIROYA
CS Tokai Univ., Fuzoku Oiso Byoin
SO Domyaku Koka (Journal of Japan Atherosclerosis Society), (1997) vol. 24, no. 9, pp. 481-486. Journal Code: Y0035A (Fig. 3, Tbl. 1, Ref. 20)
ISSN: 0386-2682
CY Japan
DT Journal; Article
LA Japanese
STA New
AB Effects of 12 weeks treatment with S, a bile acid sequestrant(C),B, or P were compared in 32,16,30, and 22 patients with hyperlipoproteinemia. Plasma levels of lipoprotein subfraction-cholesterol(C), and **activities** of LCAT and **CETP** were **measured** at 0 and 12 weeks. LDL receptor **activities** in lymphocytes cultured in lipoprotein-deficient medium were also assayed. S,B,and P reduced plasma levels of VLDL-C and IDL-C but C did not. S,C, and P reduced plasma levels of LDL1 (1.019<d<1.045)-C but B did not. S and B reduced plasma levels of LDL2(1.045<d<1.063)-C but C and P did not change. P markedly reduced plasma levels of HDL2-C but S,C, and B did not change them. B increased plasma levels of HDL3-C and P decreased them. S and B

decreased the cholesterol esterification rate but C and P did not change. P markedly increased CETP **activities** and S and B decreased them. LDL receptor **activities** positively correlated with the drug-induced reduction of LDL-C and LDL1-C. We conclude that the reduction of plasma levels of large, **light** LDL by drug treatment is mainly regulated by LDL receptor **activities** and the reduction of LDL1 by drug treatment is more prominent in patients with lower LDL receptor **activities**. (author abst.)

L38 ANSWER 3 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 2
AN 97:397009 BIOSIS
DN 99696212
TI Plasma cholesteryl ester transfer protein is lowered by treatment of hypercholesterolemia with cholestyramine.
AU Carrilho A J F; Medina W L; Nakandakare E R; Quintao E C R
CS Lipids Lab., LIM-10, Fac. Med. USP, Av. Dr. Arnaldo 455, s/3317, CEP 01246-903 Sao Paulo, Brazil
SO Clinical Pharmacology & Therapeutics 62 (1). 1997. 82-88. ISSN: 0009-9236
LA English
AB Cholestyramine (INN, colestyramine) treatment of subjects with hypercholesterolemia reduced the plasma level of **cholesteryl ester** transfer protein (**CETP**) as **measured** by radioimmunoassay (**CETP**-RIA) and, as expected, also reduced the levels of total cholesterol, low-density lipoprotein (LDL) cholesterol, and apolipoprotein B. The extent of CETP variation was significant only in the subjects whose LDL cholesterol levels were reduced by more than 25%. Furthermore, CETP-RIA was correlated with total cholesterol, LDL cholesterol, and apolipoprotein B concentrations. Plasma **CETP** was also **measured** by an indirect procedure that uses high-density lipoprotein (HDL) 14C-cholesteryl ester and very low-density lipoprotein cholesterol from a pool of plasma **donors**, and the patient's plasma as the source of **CETP**. The two procedures for **CETP determination** correlated well with each other, although the CETP-RIA was more sensitive in the **detection** of changes of plasma **CETP** ascribed to cholestyramine (INN, colestyramine) treatment. The rise of plasma HDL cholesterol levels after cholestyramine probably resulted from the reduction of CETP **activity**.

L38 ANSWER 4 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 3
AN 97:176097 BIOSIS
DN 99467810
TI Increased plasma cholesteryl ester transfer activity in obese children.
AU Hayashibe H; Asayama K; Nakane T; Uchida N; Kawada Y; Nakazawa S
CS Dep. Pediatrics, Yamanashi Med. Univ., 1100 Shimokato, Tamahocho,

Nakakoma, Yamanashi 409-38, Japan
SO Atherosclerosis 129 (1). 1997. 53-58. ISSN: 0021-9150
LA English
AB To **determine** whether enhanced **activity** of **cholesteryl ester** transfer protein (CETP) contributes to the development of atherogenic lipoprotein profiles in obese children, plasma CETP **activity** was assayed according to a micro-method, by co-incubating lipoprotein-deficient samples with exogenous **donor** and acceptor lipoproteins. The study subjects were 31 obese children (14 males and 17 females). Serum levels of triglycerides, total cholesterol (TC), low-density lipoprotein cholesterol (LDL-C), TC:high-density lipoprotein (HDL)-C, LDL-C:HDL-C, apolipoprotein (apo) B, and apo B:apo A1 were increased in obese children, Thus they appeared to exhibit an atherogenic lipoprotein profile, with a relative decrease in cholesterol carried by HDL compared with the cholesterol in the other lipoprotein fractions. The mean fasting plasma insulin level was also increased. CETP **activity** was significantly higher in the obese children than in nonobese control children, and was correlated with LDL-C, TC:HDL-C, LDL-C:HDL-C, and apo B:apo A1. These results suggest that an increase in plasma CETP **activity** results in atherogenic change in lipoprotein metabolism in obese children. The increase in CETP may be due to the adiposity or insulin resistance. Alternatively, dyslipidemia per se, physical inactivity or excessive fat intake, that are commonly found in obese children, may contribute to the increase in CETP **activity**.

L38 ANSWER 5 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 4
AN 96:575599 BIOSIS
DN 99290280
TI Exon 10 skipping caused by intron 10 splice **donor** site mutation in cholesteryl ester transfer protein gene results in abnormal downstream splice site selection.
AU Sakai N; Santamarina-Fojo S; Yamashita S; Matsuzawa Y; Brewer H B Jr
CS Molecular Dis. Branch, Natl. Heart Lung Blood Inst., Natl. Inst. Health, 10 Center Dr., MSC 1666, Bethesda, MD 20892-1666, USA
SO Journal of Lipid Research 37 (10). 1996. 2065-2073. ISSN: 0022-2275
LA English
AB Cholesteryl ester transfer protein (CETP) deficiency is the most common cause of hyperalphalipoproteinemia in Japan. However, the genetic basis of this disorder has not been fully characterized. We have studied a 49-year-old Japanese male presenting with total cholesterol, HDL-cholesterol, and apolipoprotein A-I levels of 300, 236, and 233 mg/dl, respectively, and total absence of CETP **activity** and mass in plasma. Sequence analysis of the patient's CETP gene revealed that the splice **donor** consensus GT was substituted by GG in intron 10 (intron 10 splice defect) and by AT in intron 14 (intron 14 splice defect). Restriction digestion of PCR-amplified DNA using NdeI and MaeIII established that

the patient was a compound heterozygote for both gene defects. Sequencing of cDNA amplified by RT-PCR from the patient's monocyte-derived macrophage RNA demonstrated abnormal splicing with deletion of exon 10 as well as alternative splicing at a native AG site located 31 nucleotides 5' of the normal splice acceptor in intron 13. Thus, the intron 10 splice defect results in exon 10 skipping and the insertion of a 31 bp fragment between exon 13 and exon 14, which contains an in frame stop codon. The presence of abnormally spliced mRNA was further confirmed by amplification of patient cDNA using CETP specific primers. Abnormal splicing of exon 14 as a result of the intron 14 splice defect was not **detected**, indicating potential unstable **CETP** mRNA derived from that mutation. These findings demonstrate that a novel splice site mutation in intron 10 of the CETP gene results in the skipping of exon 10, as well as disruption of downstream splicing at intron 13 identifying a novel mechanism leading to CETP deficiency.

L38 ANSWER 6 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 5
AN 95:340226 BIOSIS
DN 98354526
TI Immunospecific scintillation proximity assay of cholesteryl ester transfer protein activity.
AU Lagrost L; Loreau N; Gambert P; Lallemant C
CS Lab. Biochim. Med., Hopial Bocage, 21034 Dijon, France
SO Clinical Chemistry 41 (6 PART 1). 1995. 914-919. ISSN: 0009-9147
LA English
AB We describe a novel, immunospecific scintillation proximity assay for **determining cholesteryl ester** transfer protein (**CETP**) **activity** in total human serum and in reconstituted experimental mixtures. The assay is based on the **measurement** of radiolabeled **cholesteryl esters** transferred from a tracer dose of biosynthetically labeled high-density lipoprotein subfraction 3 to unlabeled apolipoprotein (apo) B-containing lipoproteins. The radioactivity content of the apo B-containing lipoprotein fraction can be evaluated without separating the **donor** from the acceptor lipoprotein substrates, and is measured through the formation of ternary complexes involving the radiolabeled apo B-containing lipoproteins, specific antiapo B antibodies from sheep, and anti-sheep antibody-labeled fluoromicrospheres. Good correspondences were observed between CETP **activity** values obtained either with the ultracentrifugation method or the immunospecific scintillation proximity assay ($n = 70$; $r = 0.94$; $P = 0.0001$), and between values obtained for either fresh or frozen serum samples ($n = 70$; $r = 0.93$; $P = 0.0001$). Because of its potential for automation, the immunospecific scintillation proximity assay may constitute a convenient tool to **measure** serum **CETP activity** in the clinical laboratory.

L38 ANSWER 7 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 6
AN 95:102347 BIOSIS
DN 98116647
TI Defective binding of neutral lipids by a carboxyl-terminal deletion mutant of cholesteryl ester transfer protein: Evidence for a carboxyl-terminal cholesteryl ester binding site essential for neutral lipid transfer activity.
AU Wang S; Kussie P; Deng L; Tall A
CS Schering-Plough Res. Inst., Kenilworth, NJ 07033, USA
SO Journal of Biological Chemistry 270 (2). 1995. 612-618. ISSN: 0021-9258
LA English
AB The plasma cholesteryl ester transfer protein (CETP, 476 amino acids) transfers cholesteryl ester (CE) from high density lipoprotein (HDL) to triglyceride-rich lipoproteins and plays a major role in HDL catabolism. Using deletional and site-directed mutagenesis, we previously showed that the carboxyl terminus of human CETP comprises the epitope of a neutralizing monoclonal antibody and is necessary for neutral lipid transfer **activity**. To assess the nature of the involvement of the COOH terminus in cholesteryl ester transfer **activity**, we characterized a deletion mutant of CETP lacking amino acid residues 470-475 in terms of CE transfer kinetics, association with HDL, and capacity to bind CE, triglyceride (TG), and phosphatidylcholine (PC). Kinetic analysis indicated a major catalytic defect of the deletion mutant, as shown by markedly decreased maximum cholesteryl ester transfer **activities** (apparent V-max) for **donor** (HDL) and acceptor (low density lipoprotein (LDL)) lipoproteins but there were no significant changes of concentrations of the **donor** and acceptor at 50% V-max (apparent K-m). The binding of **CETP** to HDL, as **determined** by native gel electrophoresis, was similar for wild-type and mutant protein. When egg PC/CE vesicles were incubated with wild type CETP and then separated by gel filtration chromatography, there was maximum binding of about 1 mol of CE/mol of CETP. Under similar conditions the mutant CETP bound 0.09-0.37 mol of CE/mol of protein. Similarly, when egg PC/TG vesicles were incubated with the CETP proteins, there was a maximum binding of 0.5 mol of triglyceride/mol of wild-type CETP, whereas there was only 0.00-0.07 mol of TG/mol of deletion mutant. The binding of phosphatidylcholine was similar for wild-type and the deletion mutant. The studies suggest that amino acids 470-475 (forming part of a COOH-terminal amphipathic helix) are involved in CE and TG binding by CETP but are not required either for the binding of PC by CETP or the association of CETP with HDL. The COOH terminus of CETP may comprise a neutral lipid binding site directly involved in the lipid transfer mechanism.

L38 ANSWER 8 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 7
AN 95:320236 BIOSIS
DN 98334536

TI The cell membrane of Mycoplasma penetrans: Lipid composition and phospholipase A-1 activity.
AU Salman M; Rottem S
CS Dep. Membrane Ultrastructure Research, Hebrew Univ.-Hadassah Med. Sch., P.O. Box 12272, Jerusalem 91120, Israel
SO Biochimica et Biophysica Acta 1235 (2). 1995. 369-377. ISSN: 0006-3002
LA English
AB Analysis of Mycoplasma penetrans membrane **lipids** revealed that, in addition to large amounts of unesterified cholesterol, M. penetrans incorporated exogenous phospholipids, preferentially sphingomyelin, from the growth medium. The major phospholipids synthesized de novo by M. penetrans were phosphatidylglycerol (PG) and diphosphatidylglycerol (DPG). In vivo labeling of PG and DPG by growing the cells with radioactive palmitate or oleate, followed by snake venom phospholipase A-2 treatment, enabled us to assess the positional distribution of fatty acids in these **lipids**. Saturated fatty acids were found preferentially in position 2 of the glycerol backbone, and not in position 1 as found elsewhere in nature, while unsaturated fatty acids prefer position 1. M. penetrans membranes contain phospholipase **activity** of the A-1 type, removing a fatty acid from the sn-1 ester bond of phospholipids. The **activity** was neither stimulated by Ca-2+ nor inhibited by EGTA and had a broad pH spectrum. The substrate specificity of the enzyme was investigated with various natural **lipids** and with a **fluorescent** analog of the phosphatidylcholine. The enzyme was equally active toward phosphatidylcholine and phosphatidylglycerol, but did not hydrolyze diphosphatidylglycerol. The enzyme did not act on triacylglycerol, diacylglycerol or **cholesteryl ester**, but low **activity** was **detected** toward monoacylglycerol. The enzyme was heat-sensitive and detergent-sensitive, and was almost completely inhibited by p-bromophenacylbromide (50 mu-M), but was not affected by SH reagents. This study is the first one reporting phospholipase A-1 **activity** in Mollicutes. A possible role of this enzyme in forming **lipid** mediators upon the interaction of M. penetrans cells with eukaryotic cells is suggested.

L38 ANSWER 9 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS
AN 95:138560 BIOSIS
DN 98152860
TI An improved **fluorescence** method for **measuring** the **activity** of **cholesteryl ester** transfer protein (**lipid** transfer protein).
AU Epps D E; Harris J S; Greenlee K A; Fisher J F; Marschke C K; Castle C K; Ulrich R G; Moll T S; Melchior G W; Kezdy F J
CS Upjohn Lab., Upjohn Co., Kalamazoo, MI 49001, USA
SO 39th Annual Meeting of the Biophysical Society, San Francisco, California, USA, February 12-16, 1995. Biophysical Journal 68 (2 PART

2). 1995. A196. ISSN: 0006-3495
DT Conference
LA English

L38 ANSWER 10 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 8
AN 95:431627 BIOSIS
DN 98445927
TI Method for **measuring** the **activities** of **cholesteryl ester** transfer protein (lipid transfer protein).
AU Epps D E; Harris J S; Greenlee K A; Fisher J F; Marschke C K; Castle C K; Ulrich R G; Moll T S; Melchior G W; Kezdy F J
CS Upjohn Laboratories, 7000 Portage Road, Kalamazoo, MI 49001, USA
SO Chemistry and Physics of Lipids 77 (1). 1995. 51-63. ISSN: 0009-3084
LA English
AB A continuous recording **fluorescence** assay was developed for cholesteryl ester transfer protein (CETP). The assay measures the increase in **fluorescence** accompanying the relocation of **fluorescent lipids**, cholesteryl esters and triglycerides, from a **donor** emulsion to an acceptor emulsion. In the absence of CETP, the quantum yields of the **fluorescent lipids** is low because their high concentrations in the **donor** emulsions result in self-quenching. CETP catalyzes the redistribution of the **fluorescent lipids** from the **donor** to the acceptor emulsions and **fluorescence** increases substantially. Efficient sonication and incorporation of apolipoproteins from human HDL into the emulsions significantly increased the transfer rates. Under optimal conditions, the redistribution of **fluorescent** compounds reaches equilibrium within lt 30 min and the kinetics of this process are consistent with a simple, first-order reaction pathway. The redistribution kinetics support a mechanism of adsorption fwdarw exchange fwdarw desorption fwdarw diffusion.

L38 ANSWER 11 OF 25 WPIDS COPYRIGHT 1998 DERWENT INFORMATION LTD
AN 94-342057 [42] WPIDS
CR 95-311316 [40]
DNN N94-268244 DNC C94-155896
TI **Determn.** of **cholesteryl ester** transfer protein **activity** - using a new **donor** particle contg. N-(7-nitrobenz-2-oxa-1,3-diazol-4-yl) amino- cholesteryl ester.
DC B01 B04 D16 S03
IN BROCIA, R W; SWENSON, T L; BROCIA, R
PA (DIAG-N) DIAGNESCENT TECHNOLOGIES INC; (BROC-I) BROCIA R W; (SWEN-I) SWENSON T L
CYC 27
PI WO 9424567 A1 941027 (9442)* EN 27 pp

RW: AT BE CH DE DK ES FR GB GR IE IT LU MC NL PT RU SE
W: AU BR CA CN FI JP KR NO NZ
AU 9466306 A 941108 (9507)
US 5618683 A 970408 (9720) 8 pp
ADT WO 9424567 A1 WO 94-US3929 940411; AU 9466306 A AU 94-66306 940411;
US 5618683 A US 93-46772 930413
FDT AU 9466306 A Based on WO 9424567
PRAI US 93-46772 930413
AN 94-342057 [42] WPIDS
CR 95-311316 [40]
AB WO 9424567 A UPAB: 971113
A synthesised **donor** particle (A) comprising: (a) a **fluorescent** gp. covalently bonded to a cholesteryl ester (CE) to form a N-(7-nitrobenz-2-oxa-1,3-diazol-4-yl)amino-(NBD-) CE core, (b) a monolayer of phospholipid that surrounds the NBD-CE core and (c) an apolipoprotein apoA-1 dispersed within the monolayer and associated with an aq. phase that surrounds the particle and the monolayer, is new. Also claimed are: (B) a synthesised **donor** particle comprising 22-(NBD)-23,24-bisnor-5-cholen-3B-yl linoleate (NBD-cholesteryl linoleate); (C) a method for measuring the **activity** of CE transfer protein (CETP) comprising: (a) adding a prepd. sonicated particle to a buffer to form a buffered soln., (b) adding an emulsion of **lipid** to the buffered soln. to accept the transfer of neutral **lipid**, (c) adding CETP to the buffered soln., (d) incubating the buffered soln. and (e) reading the **fluorescence** of the buffered soln. to **measure** the **activity** of the **CETP**; (D) a method for **measuring** the **activity** of **CETP** comprising (a) interacting CETP with a synthetic NBD-CE emulsion, (b) shuttling NBD-CE molecules out of the emulsion and (c) releasing the NBD-CE from the CETP to an acceptor which is an emulsion made with triglycerides and phosphatidylcholine (PC); (E) a diagnostic kit for **measuring** the **activity** of **CETP** comprising: (a) a first glass vial having 10 ml of a liq. mixt. that includes 125 mu l of a sonicated particles and 9.875 ml of a buffer (A) comprising 10mM of trizma HCl, 150 mM of NaCl and 2 mM of EDTA, where the buffer has a pH of 7-8 and (b) a second glass vial having a soln. that includes 50 mu l of an acceptor which is a **lipid** emulsion of triglyceride and phosphatidylcholine (PC), and 9.5 ml of a buffer (A); (F) a method for making a synthetic **donor** particle for **measuring** the **activity** of **CETP** comprising (a) sonicating at a predetermined sonication energy a mixt. of 1.32x10-5 moles of NBD-labelled neutral **lipid** with 13 mg of PC to form an emulsion, (b) maintaining a temp. of 50 deg. C for 45 mins. in a buffer of 10 ml of 0.1M KCl/10mM trizma HCl at pH 7-8, (c) lowering the temp. to 40 deg. C. and lowering the sonication energy to 2/3 of the predetermined sonication energy, (d) adding over 15 mins., 12 mg. of an apolipoprotein apoA-I in 800 mu l

of 2.5M urea and (e) centrifuging the remove titanium.

USE - The prods. and methods can be used for the rapid and accurate determn. of CETP activity in patient samples. If a patient has high CETP activity, a modification of the individual's diet can be recommended before atherosclerosis is evidenced.

ADVANTAGE - The diagnostic device is accurate and does not use radioisotopes.

Dwg.0/5

ABEQ US 5618683 A UPAB: 970516

Synthesised donor particle for donating a cholesterol ester or deriv. to a neutral lipid transfer protein comprises:

a fluorescent gp. covalently bonded to a cholesteryl ester to form an N-(7-nitrobenz-2-oxa-1,3-diazol-4-yl)amino-cholesteryl ester (NBD-CE) core;

a monolayer of phospholipid that surrounds the NBD-CE core, and

an apolipoprotein apoA-I dispersed within the monolayer and associated with an aq. phase that surrounds the particle and the monolayer.

Dwg.0/5

L38 ANSWER 12 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 9

AN 95:25029 BIOSIS

DN 98039329

TI Genetic cholesteryl ester transfer protein deficiency caused by two prevalent mutations as a major determinant of increased levels of high density lipoprotein cholesterol.

AU Inazu A; Jiang X-C; Haraki T; Yagi K; Kamon N; Koizumi J; Mabuchi H; Takeda R; Takata K; Moriyama Y; Doi M; Tall A

CS Second Dep. Internal Med., Sch. Med., Kanazawa Univ., Takara-machi 13-1, Kamazawa 920, Japan

SO Journal of Clinical Investigation 94 (5). 1994. 1872-1882. ISSN: 0021-9738

LA English

AB Genetic determinants of HDL cholesterol (HDL-C) levels in the general population are poorly understood. We previously described plasma cholesteryl ester transfer protein (CETP) deficiency due to an intron 14 G(+1)-to-A mutation(Int14 A) in several families with very high HDL-C levels in Japan. Subjects with HDL-C gtoreq 100 mg/dl (n = 130) were screened by PCR single strand conformational polymorphism analysis of the CETP gene. Two other mutations were identified by DNA sequencing or primer-mediated restriction map modification of PCR products: a novel intron 14 splice donor site mutation caused by a T insertion at position +3 from the exon14/intron14 boundary (Int14 T) and a missense mutation (Asp-442 to Gly) within exon 15 (D442G). The Int14 T mutation was only found in one family. However, the D442G and Int14 A mutations were highly prevalent in subjects with HDL-C gtoreq 60 mg/dl, with combined allele frequencies of 9%, 12%, 21%, and 43% for HDL-C 60-79, 80-99, 100-119, and gtoreq

120 mg/dl, respectively. Furthermore, prevalences of the D442G and Int14 A mutations were extremely high in a general sample of Japanese men (n = 236), with heterozygote frequencies of 7% and 2%, respectively. These two mutations accounted for about 10% of the total variance of HDL-C in this population. The phenotype in a genetic compound heterozygote (Int14 T and Int14 A) was similar to that of Int14 A homozygotes (no **detectable CETP** and markedly increased HDL-C), indicating that the Int14 T produces a null allele. In four D442G homozygotes, mean HDL-C levels (86+-26 mg/dl) were lower than in Int14 A homozygotes (158+-35 mg/dl), reflecting residual CETP **activity** in plasma. In 47 D442G heterozygotes, mean HDL-C levels were 91+-23 mg/dl, similar to the level in D442G homozygotes, and significantly greater than mean HDL-C levels in Int14 A heterozygotes (69+-15 mg/dl). Thus, the D442G mutation acts differently to the null mutations with weaker effects on HDL in the homozygous state and stronger effects in the heterozygotes, suggesting dominant expression of a partially defective allele. CETP deficiency, reflecting two prevalent mutations (D442G and Int14 A), is the first example of a genetic deficiency state which is sufficiently common to explain a significant fraction of the variation in HDL-C in the general population.

L38 ANSWER 13 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 10
AN 94:122995 BIOSIS
DN 97135995
TI A new in vitro method for the simultaneous evaluation of cholesteryl ester exchange and mass transfer between HDL and apoB-containing lipoprotein subspecies: Identification of preferential cholesteryl ester acceptors in human plasma.
AU Guerin M; Dolphin P J; Chapman M J
CS INSERM Unit 321, Hopital de la Pitie, 75651 Paris Cedex 13, FRA
SO Arteriosclerosis and Thrombosis 14 (2). 1994. 199-206. ISSN: 1049-8834
LA English
AB To date, several methods have been developed to determine the **activity** of plasma lipid transfer proteins. These methods have largely involved the addition of the transfer protein in question to labeled substrates, followed by prolonged incubation (4 to 18 hours) and subsequent evaluation of the radioactivity transferred to precipitated low-density lipoprotein (LDL). While adequate for **determining** the **activity** of **cholesteryl ester** transfer protein (CETP), these methods generally do not take into account the composition or levels of lipoproteins present within a given individual plasma because pools of high-density lipoprotein (HDL) are labeled and used for the transfer experiments. Both the direction and the extent of lipid transfer are dependent on the composition and relative abundance of both **donor** and acceptor particles as well as the **activity** of the lipid transfer protein(s). Here we describe a

new method for the determination of the capacity of plasma samples to facilitate cholesteryl ester transfer from HDL to LDL and very-low-density lipoprotein (VLDL), a method that has several advantages. First, the subject's HDL is labeled and used for transfer. Second, the labeled HDL, in a quantity equivalent to 1% of the plasma HDL mass, is added to the subject's plasma, and therefor the relative abundance of both **donor** and acceptor particles is preserved at their physiological levels. Third, both **cholesteryl ester** mass and radioactivity are **determined**, allowing the net mass transfer of cholesteryl ester and **cholesteryl ester** exchange to be **quantified** separately. Fourth, the application of an ultracentrifugal density gradient for the subsequent reisolation of the lipoproteins permits estimation of the transfer of cholesteryl esters to various subfractions of LDL; such measurement is not possible when precipitation techniques are used to determine total LDL radioactivity. The method allows estimation of the total physiological capacity of a plasma sample to mediate cholesteryl ester transfer, which may represent a more relevant **measurement** than that of **CETP activity** alone. **Cholesteryl ester** exchange and mass transfer were **determined** in four normolipidemic and two moderately hypertriglyceridemic subjects by this new in vitro method. Net transfer of cholesteryl ester from HDL to VLDL was increased twofold in mildly hypertriglyceridemic subjects (triglycerides gt 100 and lt 150 mg/dL). Cholesteryl ester mass transfer predominated for the first 6 hours of incubation, after which cholesteryl ester exchange predominated. Our data indicated that on a quantitative basis VLDL and the **light** LDL subspecies (LDL-1, d=1.019 to 1.023 g/mL) are preferential cholesteryl ester acceptors among the apolipoprotein B-containing lipoproteins.

L38 ANSWER 14 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 11
AN 93:495647 BIOSIS
DN BA96:119654
TI USE OF FLUORESCENT CHOLESTERYL ESTER MICROEMULSIONS IN CHOLESTERYL ESTER TRANSFER PROTEIN ASSAYS.
AU BISGAIER C L; MINTON L L; ESSENBURG A D; WHITE A; HOMAN R
CS DEP. PHARMACOL., PARKE-DAVIS PHARM. RES., DIV. WARNER-LAMBERT CO., 2800 PLYMOUTH RD., ANN ARBOR, MI 48105, USA.
SO J LIPID RES 34 (9). 1993: 1625-1634. CODEN: JLPRAW ISSN: 0022-2275
LA English
AB In the present report we describe a simple and practical method to assess CETP **activity** in a defined system by use of microemulsions containing a **fluorescent** cholesteryl ester analog. The microemulsions are stable, simple to prepare, and can be made to defined composition. Initial transfer rates are easily determined by monitoring changes in **fluorescence**. We have used the **fluorescent** cholesteryl ester analog, cholesteryl

4,4-difluoro-5,7-dimethyl-4-bora-3.alpha.,4.alpha.-diaza-3-indacenedodecanoate (BODIPY-CE), to demonstrate the utility of this assay. The assay takes advantage of the concentration-dependent self-quenching of BODIPY-CE, when this analog is incorporated into microemulsions. We have used this new assay to demonstrate **fluorescent lipid** transfer facilitated by rabbit and human d>1.21 g/ml plasma fraction and recombinant human CETP. A known inhibitory monoclonal antibody (Mab) to human CETP blocked BODIPY-CE transfer in a dose-dependent manner. We have also used BODIPY-CE microemulsions to **measure CETP activity** in whole plasma.

L38 ANSWER 15 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 12
AN 93:114293 BIOSIS
DN BA95:58393
TI COMPOSITION OF HUMAN LOW DENSITY LIPOPROTEIN EFFECTS OF POSTPRANDIAL TRIGLYCERIDE-RICH LIPOPROTEINS LIPOPROTEIN LIPASE HEPATIC LIPASE AND CHOLESTERYL ESTER TRANSFER PROTEIN.
AU KARPE F; TORNVALL P; OLIVERCRONA T; STEINER G; CARLSON L A; HAMSTEN A
CS KING GUSTAF V RESEARCH INST., KAROLINSKA HOSP., S-10 401 STOCKHOLM, SWEDEN.
SO ATHEROSCLEROSIS 98 (1). 1993. 33-49. CODEN: ATHSBL ISSN: 0021-9150
LA English
AB A preponderance of small, dense low density lipoprotein (LDL) particles has been linked to increased risk of myocardial infarction, and a dense and protein-rich LDL has proved to be a characteristic of patients with manifest coronary heart disease (CHD). The present study focused on metabolic determinants of the LDL subfraction distribution with the emphasis placed on alimentary lipaemia. The relations of plasma levels and composition of **light** (1.019 < d < 1.040 kg/l) and dense (1.040 < d < 1.063 kg/l) LDL subfractions to postprandial triglyceride-rich lipoproteins (TGRL), postheparin plasma lipase **activities** and the **activity** of cholesteryl ester transfer protein (CETP) were studied in 32 men with angiographically ascertained premature coronary atherosclerosis (age 48.8 .+-. 3.2 years) and in 10 age matched healthy control men. LDL subfractions were separated by equilibrium density gradient ultracentrifugation of fasting plasma drawn before participants were subjected to an oral fat tolerance test of a mixed meal type. The response of TGRL to the oral fat load was determined by measuring plasma triglycerides, and the apolipoprotein (apo) B-48 and apo B-100 content of Sf 60-400 and Sf 20-60 lipoprotein fractions. At a second visit plasma samples were taken for determination of postheparin plasma lipoprotein lipase (LPL) and hepatic lipase (HL) **activities** and for **measurement** for **CETP activity**. Hypertriglyceridaemic patients had a preponderance of dense LDL particles compared with normotriglyceridaemic patients and controls. The magnitude of the response of TGRL to the oral fat load showed a positive association with the dense LDL apo B

concentration (r = 0.32-0.52, P < 0.05), whereas the LPL **activity** correlated positively with the free (r = 0.50, P < 0.001) and esterified cholesterol (r = 0.45, P < 0.01) and apo B (r - 0.42, P < 0.01) content of the **light** LDL fraction. The HL **activity** was found to be inversely associated with the plasma level of **light** LDL triglycerides (r = -0.38, P < 0.05). In contrast, no relations were noted between CETP **activity** and plasma concentrations of LDL constituents. Multiple stepwise linear regression analysis with the proportion of total LDL apoB contained in the dense LDL subfraction (% dense LDl apo B) used as dependent variable indicated that the combined effect of LPL **activity** and postprandial plasma levels of TGRL (areas under the curve for plasma triglycerides or Sf 60-400 apo B-48) accounted for around 50% of the variability in the distribution of LDL patients between **light** and dense subfractions. The present data suggest that LPL **activity** and the response of TGRL to fat intake are major determinants of LDL heterogeneity.

L38 ANSWER 16 OF 25 JICST-EPlus COPYRIGHT 1998 JST
AN 920286732 JICST-EPlus
TI Plasma Cholesteryl Ester Transfer Protein in Familial Hyperalphalipoproteinemia.
AU INAZU AKIHIRO
CS Kanazawa Univ., School of Medicine
SO Kanazawa Daigaku Juzen Igakkai Zasshi (Journal of the Juzen Medical Society), (1991) vol. 100, no. 6, pp. 1085-1101. Journal Code: G0716A (Fig. 9, Tbl. 4, Ref. 44)
ISSN: 0022-7226
CY Japan
DT Journal; Article
LA Japanese
STA New
AB The plasma high density lipoprotein (HDL) cholesterol is a protective factor in the development of atherosclerosis. Recently, a family with increased HDL cholesterol level was described to be deficient in cholesteryl ester transfer **activity** in plasma. Plasma cholesteryl ester transfer protein (CETP), a hydrophobic glycoprotein with Mr. 74,000, catalyzes the transfer of cholesteryl esters from HDL to other lipoproteins. Using monoclonal antibodies against human **CETP**, **CETP** was not **detected** in two siblings with increased HDL cholesterol level. They are homozygous for a point mutation in the 5'-splice **donor** site of the intron 14 of the gene for CETP, which is incompatible with normal splicing of pre-messenger RNA. Furthermore, the same splicing defect was identified in 9 unrelated families (at least one allele) out of 21 families with an increased HDL cholesterol level (>100mg/dl) who had originated from four different regions of Japan (Hokuriku, Iwate, Hiroshima, and Tokyo). Analysis of the restriction fragment length polymorphism of the CETP gene

showed that all probands of 5 CETP deficient families, were homozygous for the identical haplotype, which suggests that they may share a common genetic backgroud. Five family members with CETP deficiency were separated into three groups on the basis of the presence of the splicing defect (G.RAR.A mutation). Family members homozygous for CETP deficiency (n=10) had hypercholesterolemia (271.+-.32mg/dl, mean.+-.S.D.), markedly increased levels of HDL cholesterol (164.+-.39) and apolipoprotein A-I (213.+-.47), and decreased levels of the low density lipoprotein cholesterol (77.+-.31) and the apolipoprotein B (54.+-.14). All homozygotes showed enlarged HDL corresponding to HDL1 size (particle size: >12nm). (abridged author abst.)

L38 ANSWER 17 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 13
AN 91:433037 BIOSIS
DN BA92:89202
TI NET MASS TRANSFER OF CHOLESTERYL ESTERS FROM LOW DENSITY LIPOPROTEINS TO HIGH DENSITY LIPOPROTEINS IN PLASMA FROM NORMOLIPIDEMIC SUBJECTS.
AU VAN TOL A; SCHEEK L M; GROENER J E M
CS DEP. BIOCHEM. I, ERSMUS UNIV., P.O. BOX 1738, 3000 DR ROTTERDAM, NETHERLANDS.
SO ARTERIOSCLER THROMB 11 (1). 1991. 55-63. CODEN: ARTTE5 ISSN: 1049-8834
LA English
AB Net mass transfer of lipids was measured in plasma from fasted, normolipidemic subjects. The plasma was incubated, and lipoproteins were subsequently separated by polyanion precipitation or density gradient ultracentrifugation. Total cholesterol, unesterified cholesterol, and triglycerides were measured in the isolated lipoproteins fractions. The rate of cholesterol esterification was measured simultaneously. All plasma samples showed an increase in high density lipoprotein (HDL) cholesteryl esters during 1-hour incubations. In most cases, this increase was higher than the cholesteryl ester formation in total plasma due to cholesterol esterification. Therefore, we concluded that a net mass transfer of cholesteryl esters occurred from the very low plus low density lipoprotein (VLDL+LDL) fractions to HDL in plasma from most of the subjects studied. Transfer of triglycerides occurred from VLDL+LDL to HDL in plasma from all subjects. The **cholesteryl ester** transfer (**measured** after 1 hour) is not related to the **activity** of cholesteryl ester transfer protein. Inhibition of cholesterol esterification did not change the direction of cholesteryl ester or triglyceride transfer. Ultracentrifugal separation of plasma lipoproteins revealed that both HDL and VLDL are acceptors of cholesteryl esters and that VLDL donates triglycerides to both LDL and HDL. Removal of VLDL from plasma by ultracentrifugation did not affect the cholesteryl ester transfer from LDL to HDL. We conclude that LDL may act as a **donor** of cholesteryl esters during incubation of

normolipidemic plasma.

L38 ANSWER 18 OF 25 JICST-EPlus COPYRIGHT 1998 JST
AN 900866899 JICST-EPlus
TI Reaction mechanism in the human plasma lipid transfer protein.
AU NISHIKAWA OSAMU
CS Wakayama Medical College
SO Domyaku Koka (Journal of Japan Atherosclerosis Society), (1990) vol. 18, no. 9/10, pp. 869-885. Journal Code: Y0035A (Fig. 12, Ref. 37) ISSN: 0386-2682
CY Japan
DT Journal; Article
LA Japanese
STA New
AB Human blood plasma contains the catalytic **activity** of transfer cholesteryl ester among the plasma lipoproteins. 14C Cholesteryl ester was directly incorporated into human plasma low-density lipoproteins(LDL) for the purpose of preparing a tracer substrate to investigate the cholesteryl ester transfer reaction of the plasma lipoproteins. The radiolabeled cholesteryl oleate was sonicated with egg phosphatidylcholine to form cholesteryl ester-containing liposomes. The liposomes were incubated with plasma fraction of a density>1.006 at 37.DEG.C.. When the distribution of the radiolabeled cholesteryl ester was equilibrated for the liposomes and lipoprotein fractions, the mixture was applied to an affinity chromatography column of dextran sulfate-cellulose. The LDL was eluted by increasing the NaCl concentration and was finally isolated as a floating fraction by ultracentrifugation at a solvent density of 1.063 (ajusted with NaCl). The chemical composition, electrophoretic mobility and density of the labeled LDL were consistent with those of the native LDL. The radioactivity in this preparation was present exclusively in the cholesteryl ester. The apolipoprotein B-100 was preserved intact throughout the procedure. When the rate of **cholesteryl ester** transfer was **measured** between LDL and high density lipoproteins(HDL) by using this labeled LDL, the kinetics were consistent with the equilibrium transfer model. However, the apparent rate measured was slightly higher than that measured with the labeled LDL prepared by the method using the intrinsic cholesterol esterification reaction of plasma. The lipid-transfer protein(LTP) was partially purified about 1,600 times from human plasma using this new radiolabeled LDL in the LTP assay in order to monitor the **activity**. (abridged author abst.)

L38 ANSWER 19 OF 25 EMBASE COPYRIGHT 1998 ELSEVIER SCI. B.V.DUPLICATE 14
AN 90217379 EMBASE
TI The significance of cholesteryl ester transfer protein and hepatic triglyceride lipase activities in the pathogenesis of familial

hyperalphalipoproteinemia.
AU Yamashita S.; Sakai N.; Kihara S.; Ueyama Y.; Kawamoto T.; Nakamura T.; Funahashi T.; Kubo M.; Matsuzawa Y.; Tarui S.
CS Second Department of Internal Medicine, Osaka University Medical School, Osaka, Japan
SO J. JPN. ATHEROSCLER. SOC., (1990) 18/2 (189-195).
ISSN: 0386-2682 CODEN: DOMKDM
CY Japan
DT Journal
FS 006 Internal Medicine
LA English
AB High density lipoproteins (HDL) are known to play an important role in protecting the vasculature from atherosclerosis. We investigated cholesteryl ester transfer protein **activity** (CETPA) and postheparin lipolytic **activities** in 27 patients with familial hyperalphalipoproteinemia (FHALP). CETPA was **measured** using 3H-**cholesteryl ester**-HDL3 and VLDL+LDL as a **donor** and acceptor of **cholesteryl ester**, respectively. Postheparin lipolytic **activities** were **measured** using the non-radioisotopic method of Nozaki et al. (Clin. Chem., 30: 748-751, 1984). CETPA was significantly lower in FHALP patients than in normal controls ($p<0.001$). We found 4 probands with complete deficiency of CETPA. In these patients, cholesteryl ester was accumulated in the HDL2 fraction, which was also rich in apolipoprotein E. High performance liquid chromatography (HPLC) and analytical ultracentrifugation revealed that the low density lipoprotein (LDL) was small and polydispersed and that the HDL of patients with a complete deficiency of CETPA was markedly larger than normal HDL. In patients with FHALP, CETPA was not significantly correlated to HDL-cholesterol levels, when patients with a complete CETPA deficiency were excluded. Lipoprotein lipase (LPL) **activity** was significantly higher in FHALP patients than in normolipidemic controls ($p<0.001$), while the average hepatic triglyceride lipase (H-TGL) **activity** in patients with FHALP was not significantly different from that of normal subjects. However, two patients showed very low H-TGL **activities** and showed signs of corneal opacification and coronary heart disease. Our data show that cholesteryl ester transfer protein and H-TGL play very important roles in controlling serum HDL-cholesterol levels. We have classified FHALP into two types: FHALP with a CETPA deficiency and FHALP with low H-TGL **activity**.

L38 ANSWER 20 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 15
AN 88:311122 BIOSIS
DN BA86:28160
TI NEUTRAL LIPID TRANSFER ACTIVITIES IN THE PLASMA OF PATIENTS WITH ABETALIPOPROTEINEMIA.
AU PAPPU A S; ILLINGWORTH D R

CS DEP. MED. L465, OREG. HEALTH SCI. UNIV., PORTLAND, OREG. 97201, U.S.A.
SO ATHEROSCLEROSIS 71 (1). 1988. 1-8. CODEN: ATHSBL ISSN: 0021-9150
LA English
AB Plasma lipid transfer proteins stimulate transfer and molecular exchange of cholesteryl esters, phospholipids and triglycerides between individual plasma lipoproteins. To assess whether transfer protein **activities** are influenced by the inherent absence of apo B-containing lipoproteins, we **determined** **cholesteryl ester** and triglyceride transfer **activities** in the plasma of patients with abetalipoproteinemia (ABL). Transfer **activities** were measured in plasma fractions of d > 1.21 g/ml in 2 patients with abetalipoproteinemia and 12 normal volunteers and were expressed as a percent transfer of labeled lipid from **donor** high density lipoproteins to acceptor very low density lipoproteins. Cholesteryl ester and triglyceride transfer **activities** were reduced respectively by 50% and 66% in the plasma of patients with ABL. The addition of the plasma fraction d > 1.21 g/ml proteins from abetalipoproteinemic subjects resulted in progressive decreases in cholesteryl ester and triglyceride transfer **activities**. The reduced **activities** of these transfer proteins may reflect (at least in part) the presence of an inhibitor(s) which is heat-stable and trypsin-sensitive.

L38 ANSWER 21 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 16
AN 87:252733 BIOSIS
DN BA84:5705
TI **CHOLESTERYL ESTER** TRANSFER **ACTIVITY** IN PLASMA **MEASURED** BY USING SOLID-PHASE-BOUND HIGH-DENSITY LIPOPROTEIN.
AU SPARKS D L; CULLIS J F P; PRITCHARD P H
CS DEP. OF PATHOL., THE RES. CENT., 950 WEST 28TH AVE., VANCOUVER, B.C., CANADA, V5Z 4H4.
SO CLIN CHEM 33 (3). 1987. 390-393. CODEN: CLCHAU ISSN: 0009-9147
LA English
AB We studied the ability of lipid-transfer factors in plasma to promote transfer, to endogenous lipoproteins, of [3H]cholesteryl ester from high-density lipoprotein (HDL) covalently bound to Sepharose 4B beads. After incubation for 2 h at 37.degree. C, 12 to 14% of the [3H]cholesteryl ester had been transferred to the lipoproteins of the plasma, in the proportions 57% to HDL and 43% to low- and very-low-density lipoproteins. This process was a function of the amount of plasma present and was stimulated by addition of partly purified lipid-transfer protein. Transfer also depended on the concentration of **donor** HDL but was independent of the amount of acceptor lipoprotein. This simple evaluation of cholesteryl ester transfer does not require removal of lipoproteins from the plasma before incubation.

L38 ANSWER 22 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 17
AN 86:197457 BIOSIS
DN BA81:88757
TI IMPROVED ESTIMATION OF CHOLESTERYL ESTER TRANSFER-EXCHANGE ACTIVITY IN SERUM OR PLASMA.
AU GROENER J E M; PELTON R W; KOSTNER G M
CS INST. MED. BIOCHEMISTRY, UNIV. GRAZ, A-8010 GRAZ, AUSTRALIA.
SO CLIN CHEM 32 (2). 1986. 283-286. CODEN: CLCHAU ISSN: 0009-9147
LA English
AB This simple, routine assay for **measuring cholesteryl ester** transfer/exchange **activity** in human plasma is based on the removal of interfering lipoproteins-very-low-density (VLDL) and low-density lipoproteins (LDL)-by precipitation with polyethylene glycol. High-density lipoproteins (HDL) in the samples do not affect the results. The supernate after precipitation is mixed with [14C]cholesteryl ester-labeled LDL as **donor** and with HDL as the acceptor for the cholesteryl ester. After incubation for 16 h at 37.degree. C, LDL is separated from HDL by precipitation with dextran sulfate and the radioactivity measured in the supernate, which contains the HDL. The assay is applicable to samples containing as much as 10 mmol of triglycerides per liter. The within-assay CV was 2.7%, the day-to-day CV 6.8%. Results compared well with those by conventional procedures.

L38 ANSWER 23 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 18
AN 86:124183 BIOSIS
DN BA81:34599
TI ACTIVATION OF PHOSPHATIDYLCHOLINE-STEROL ACYLTRANSFERASE BY HUMAN APOLIPOPROTEIN E ISOFORMS.
AU STEINMETZ A; KAFFARNIK H; UTERMANN G
CS ABTEILUNG ENDOKRINOLOGIE UND STOFFWECHSEL, ZENTRUM INNERE MEDIZIN, UNIVERSITAET MARBURG, BALDINGER STRASSE, D-3500 MARBURG, FEDERAL REPUBLIC OF GERMANY.
SO EUR J BIOCHEM 152 (3). 1985. 747-752. CODEN: EJBCAI ISSN: 0014-2956
LA English
AB The reaction catalysed by phosphatidylcholine-sterol acyltransferase (EC 2.3.1.43) is believed to be the major source of cholesteryl ester in human plasma; the enzyme requires a protein activator. Several human apolipoproteins were found to exhibit an activator function, the major one being apolipoprotein A-I. Human apolipoprotein E exists in the population mainly in three different genetic isoforms; apolipoprotein E-2, E-3 and E-4. These isopeptides were isolated from subjects homozygous for one of the isoforms, incorporated into phospholipid/cholesterol/[14C] cholesterol complexes by the cholate dialysis procedure and used to measure capacity to activate phosphatidycholine-sterol acyltransferase in comparison to apolipoprotein A-I lipid substrate particles prepared by the same

procedure. Acyltransferase **activity** was **measured** by the formation of [14C] **cholesteryl ester** from [14C] cholesterol using purified enzyme. With egg yolk phosphatidylcholine as acyl **donor**, apo E was 15-19% as efficient as apolipoprotein A-I for activation of the acyltransferase. Apo-E stimulated cholesteryl ester formation by the enzyme was enhanced when 1-oleoyl-2-palmitoyl-glycerophosphocholine was used as a substrate phospholipid (45% of apo A-I phosphatidylcholine control) and most pronounced with dimyrisoylglycerophosphocholine (75% of apo A-I/phosphatidylcholine control). No significant difference in activation was found between apo E isoforms. It is included that apolipoprotein E activates phosphatidylcholine-sterol acyltransferase in vitro and that apoliprotein E isoforms are similarly effective.

L38 ANSWER 24 OF 25 DISSABS COPYRIGHT 1998 UMI Company
AN 84:9961 DISSABS Order Number: AAR0554242 (not available for sale by UMI)
TI ASPECTS OF CHOLESTEROL METABOLISM INVOLVED IN THE CHOLESTERYL ESTER CYCLE IN MACROPHAGE FOAMS CELLS AND THE ENDOCYTIC PATHWAY IN HUMAN FIBROBLASTS
AU MCGOOKEY, DIANNA JEAN [PH.D.]
CS THE UNIVERSITY OF TEXAS SOUTHWESTERN MEDICAL CENTER AT DALLAS (0761)
SO Dissertation Abstracts International, (1984) Vol. 45, No. 6B, p. 1654. Order No.: AAR0554242 (not available for sale by UMI).
DT Dissertation
FS DAI
LA English
AB Mouse peritoneal macrophages can be induced to accumulate cholesteryl esters by incubating them in the presence of acetylated low density lipoproteins. The cholesteryl esters are sequestered in neutral lipid droplets. Previous biochemical studies have **determined** that the cholesterol component of **cholesteryl ester** droplets constantly turns over with a half-time of 24 hours by a cyclic process of de-esterification and re-esterification. Morphological techniques were used to **determine** the spatial relationship of **cholesteryl ester**, free cholesterol, and lipase **activity** during normal turnover and when turnover is disrupted. Lipid droplets were surrounded by numerous 7.5-10.0 nm filaments; moreover, at focal sites on the margin of each droplet there were whorles of concentrically arranged membrane that penetrated the matrix. Histochemically detectable lipase **activity** was associated with these stacks of membrane. Using filipin as a **light** and electron microscopic probe for free cholesterol, it was determined that a pool of free cholesterol was associated with each lipid droplet. Following incubation in the presence of the exogenous cholesterol acceptor, high density lipoprotein, the cholesteryl ester droplets disappeared and were

replaced with lipid droplets of a different lipid composition. Inhibition of cholesterol esterification caused cholesteryl ester droplets to disappear and free cholesterol to accumulate in numerous membrane-filled vacuoles in the body of the cell.

Filipin was also used as an electron microscopic probe for cholesterol in cellular membranes. Previous studies have shown that coated pits and coated vesicles do not appear to bind filipin. This has led to the suggestion that these membranes are low in cholesterol compared with the remainder of the plasma membrane. Since coated endocytic vesicles become uncoated vesicles during the transport of internalized ligands to the lysosomes, studies were carried out to determine whether or not the membranes that surround these transport vesicles are unable to bind filipin and, therefore, are also low in cholesterol. Cells were incubated with ferritin-conjugated ligands that bind to the low density lipoprotein receptors in coated pits. After allowing internalization of the conjugates, the cells were fixed in either the presence or absence of filipin. Coordinate with the dissociation of the clatharin coat from the endocytic vesicles, the membranes became sensitive to the formation of filipin-sterol complexes. . . . (Author's abstract exceeds stipulated maximum length. Discontinued here with permission of author.) UMI

L38 ANSWER 25 OF 25 BIOSIS COPYRIGHT 1998 BIOSIS DUPLICATE 19
AN 84:264156 BIOSIS
DN BA78:636
TI MORPHOLOGICAL CHARACTERIZATION OF THE CHOLESTERYL ESTER CYCLE IN CULTURED MOUSE MACROPHAGE FOAM CELLS.
AU MCGOOKEY D J; ANDERSON R G W
CS DEP. CELL BIOLOGY, UNIV. TEX. HEALTH SCI. CENTER, DALLAS, TEX. 75235.
SO J CELL BIOL 97 (4). 1983. 1156-1168. CODEN: JCLBA3 ISSN: 0021-9525
LA English
AB Mouse peritoneal macrophages can be induced to accumulate cholesteryl esters by incubating them in the presence of acetylated low density lipoprotein. The cholesteryl esters are sequestered in neutral lipid droplets that remain in the cell even when the acetylated low density lipoprotein is removed from the culture media. The cholesterol component of cholesteryl ester droplets constantly turns over with a half time of 24 h by a cyclic process of de-esterification and re-esterification. Morphologic techniques were used to **determine** the spatial relationship of **cholesteryl ester**, free cholesterol and lipase **activity** during normal turnover, and when turnover is disrupted. Lipid droplets were surrounded by numerous 7,5-10.0-nm filaments; moreover, at focal sites on the margin of each droplet there were whorles of concentrically arranged membrane that penetrated the matrix. Histochemically detectable lipase **activity** was associated with these stacks of membrane. Filipin was used as a **light** microscopic and EM probe for free cholesterol to determine that a

pool of free cholesterol was associated with each lipid droplet. Following incubation in the presence of the exogenous cholesterol acceptor, high density lipoprotein, the cholesteryl ester droplets disappeared and were replaced with lipid droplets of a different lipid composition. Inhibition of cholesterol esterification caused cholesteryl ester droplets to disappear and free cholesterol to accumulate in numerous myelin-like structures in the body of the cell.

=> d his l39-; d 1-5 bib abs; fil hom

(FILE 'CA, CAPLUS, BIOSIS, MEDLINE, EMBASE, LIFESCI, BIOTECHDS, WPIDS, CONFSCI, DISSABS, SCISEARCH, JICST-EPLUS, PROMT, USPATFULL'
ENTERED AT 12:13:19 ON 09 JUN 1998)

Author

L39 77 S BROCIA R?/AU
L40 14 S L39 AND L6
L41 5 DUP REM L40 (9 DUPLICATES REMOVED)

L41 ANSWER 1 OF 5 USPATFULL
AN 97:29342 USPATFULL
TI Diagnostic kit for **cholesteryl ester** transfer protein (**CETP**) activity **measurement** and a new synthetic particle used therein
IN **Brocia, Robert W.**, 15 Moore Rd., Bronxville, NY, United States 10708
Swenson, Theresa L., 445 E. 68th St., Apt. 8B, New York, NY, United States 10021
PI US 5618683 970408
AI US 93-46772 930413 (8)
DT Utility
EXNAM Primary Examiner: Kight, John; Assistant Examiner: Leary, Louise N.
CLMN Number of Claims: 25
ECL Exemplary Claim: 1
DRWN 5 Drawing Figure(s); 2 Drawing Page(s)
LN.CNT 561
CAS INDEXING IS AVAILABLE FOR THIS PATENT.
AB A diagnostic device is provided that **determines** the activity of **CETP** by the use of a new synthesized donor particle. The method in the diagnostic device for **measuring** the activity of **cholesteryl ester** transfer protein comprises: adding a prepared sonicated particle to a buffer to form a buffered solution, adding an Intralipid emulsion to the buffered solution for the purpose of accepting the transfer of neutral lipid, adding cholesteryl ester transfer protein to the buffered solution incubating the buffered

solution, and reading the fluorescence of the buffer solution to **measure** the activity of the **cholesteryl ester** transfer protein. The synthesized donor particle is representative of a high density lipoprotein and comprises a fluorescent group, N-(7-nitrobenz-2-oxa-1,3-diazol-4-yl) amino-covalently bound to a cholesteryl ester to form a NBD-CE core, a monolayer of phospholipid that surrounds the NBD-CE core and an apolipoprotein apoA-I associated with the monolayer and an aqueous phase.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L41 ANSWER 2 OF 5 CA COPYRIGHT 1998 ACS DUPLICATE 1
AN 126:101455 CA
TI Fluorescent assay and method that corrects for spectral interference
IN **Brocia, Robert W.**
PA Diagnescent Technologies, Inc., USA
SO U.S., 16 pp. Cont.-in-part of U.S. Ser. No. 46,772.
CODEN: USXXAM
PI US 5585235 A 961217
AI US 93-148731 931029
PRAI US 93-46772 930413
DT Patent
LA English
AB A method is provided for **measuring** the activity of **cholesteryl ester** transfer protein or MTP. The method comprises the steps of: adding a prepd. emulsion particle to a buffer to form a buffered soln. simulating physiol. conditions, adding an emulsion of lipid to the buffered soln. of prepd. sonicated particle, adding a source of CETP or MTP to the buffered soln., adding a compd. to the buffered soln. for the purpose of testing the compd.'s effect on the neutral lipid transfer protein (CETP or MTP) activity, incubating the buffered mixt., reading the fluorescence of the soln., and calcg. the effect of the compd. on the emission spectra of the transfer label so transfer activity can than be accurately detd. A device that **dets**. the activity of **CETP** or MTP by the use of a newly synthesized donor particle without regard to the presence of colored or otherwise interfering factors. A system comprises a donor particle comprised of a self quenching fluorescent neutral lipid core, an acceptor particle to accept protein facilitated transfer of fluorescent neutral lipid, and detg. interference on the emission intensity of the fluorescence of the particles.

L41 ANSWER 3 OF 5 CA COPYRIGHT 1998 ACS DUPLICATE 2
AN 123:250658 CA
TI A fluorescent assay and method that corrects for spectral interference
IN **Brocia, Robert W.**

PA Diagnescent Technologies, Inc., USA
SO PCT Int. Appl., 34 pp.
CODEN: PIXXD2
PI WO 9522621 A1 950824
DS W: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, ES, FI, GB, GE, HU, JP, KE, KG, KP, KR, KZ, LK, LT, LU, LV, MD, MG, MN, MW, NL, NO, NZ, PL, PT, RO, RU, SD, SE, SI, SK, TJ, TT, UA, UZ, VN
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
AI WO 94-US11703 941014
PRAI US 93-148731 931029
DT Patent
LA English
AB A method for measuring the activity of cholesterol ester transfer protein or MTP by calcg. the effect of the compd. on the emission spectra of the transfer label so transfer activity can then be accurately detd. is provided. The figure shows a synthetic or synthesized particle (32) which is a representative of an emulsion. A device that **dets**. the activity of **CETP** or MTP by the use of a newly synthesized donor particle without regard to the presence of colored or otherwise interfering factors for use in this invention is claimed. A system comprising a donor particle comprised of a self-quenching fluorescent facilitated transfer or fluorescent neutral lipid, and detg. interference on the emission intensity of the fluorescence of the particles is claimed.

L41 ANSWER 4 OF 5 CA COPYRIGHT 1998 ACS DUPLICATE 3
AN 122:50739 CA
TI Diagnostic kit for **cholesteryl ester** transfer protein (**CETP**) activity fluorescent **measurement**, and a new synthetic particle used therein
IN **Brocia, Robert Wellstood**; Swenson, Theresa Lynn
PA Diagnescent Technologies, Inc., USA
SO PCT Int. Appl., 26 pp.
CODEN: PIXXD2
PI WO 9424567 A1 941027
DS W: AU, BR, CA, CN, FI, JP, KR, NO, NZ, RU
RW: AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE
AI WO 94-US3929 940411
PRAI US 93-46772 930413
DT Patent
LA English
AB A diagnostic device is provided that **dets**. the activity. of **CETP** by the use of a new synthetic donor particle. The method in the diagnostic device for **measuring** the activity of **cholesteryl ester** transfer protein comprises adding a prepd. sonicated particle to a buffer to form a buffered soln., adding an Intralipid emulsion to the buffered soln. for the purpose of accepting the transfer of neutral lipid, adding cholesteryl ester transfer protein to the buffer soln., and reading

the fluorescence of the buffer soln. to **measure** the activity of the **cholesteryl ester** transfer protein. In a preferred embodiment, the fluorescent N-(7-nitrobenz-2-oxa-1,3-diazol-4-yl)amino group (NBD) is covalently bonded to cholesteryl ester to form NBD-CE. The transfer process includes the CETP interacting with the prepd. synthetic NBD-CE emulsion and shuttles NBD-CE mols. away from the core of the emulsion. The CETP releases the NBD-CE to an acceptor particle. The fluorescence intensity of the NBD-CE increases as the NBD-CE is moved from the synthetic HDL-type sonicated emulsion to the acceptor particle.

L41 ANSWER 5 OF 5 CA COPYRIGHT 1998 ACS DUPLICATE 4
AN 107:56929 CA
TI Accelerated transfer of cholesteryl esters in dyslipidemic plasma. Role of cholesteryl ester transfer protein
AU Tall, Alan; Granot, Esther; **Brocia, Robert**; Tabas, Ira; Hesler, Charles; Williams, Kevin; Denke, Margo
CS Coll. Physicians Surg., Columbia Univ., New York, NY, 10032, USA
SO J. Clin. Invest. (1987), 79(4), 1217-25
CODEN: JCINAO; ISSN: 0021-9738
DT Journal
LA English
AB Plasma cholesteryl esters, synthesized in the high d. lipoproteins (HDL), may be transferred to other lipoproteins by a cholesteryl ester transfer protein (CETP). A 2-fold increase in mass transfer of cholesteryl ester from HDL to apoB-contg. lipoproteins was found in incubated hypercholesterolemic rabbit plasma compared with control. There was 2-4-fold increase in the activity of **CETP**, **measured** in an isotopic assay in hypercholesterolemic plasma. A CETP-like mol. was isolated in increased amts. from hypercholesterolemic plasma. Incubated plasma from 4 dysbetalipoproteinemic subjects also showed an increase (3-fold) in cholesteryl ester mass transfer, compared with normolipidemic controls. There was a 2-fold increase in the activity of CETP, assayed in whole or lipoprotein-free plasma. Thus, there is increased transfer of cholesteryl esters from HDL to potentially atherogenic apoB-contg. lipoproteins in dyslipidemic rabbit and human plasma. The enhanced transfer results in part from increased activity of CETP, possibly reflecting an increase in CETP mass.

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